input AIX)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United Nations (UN)
Abstract: These books contain summaries of the national reports prepared for the UN Conference on Environment and Development held in Rio de Janeiro, June 1992. Summary reports of the following countries are included: V. (1) Algeria, Argentina, Barbados, Belize, Benin, Burkina Faso, Burundi, Canada, Chad, China, Costa Rica, Cote d'Ivoire, Cyprus, Djibouti, Egypt, Fiji, Finland, France, Guinea, Jordan, Maldives, Mali, Mauritania, Mozambique, Netherlands, Niger, Nigeria, Niue, Paraguay, Romania, Senegal, Singapore, Solomon Islands, South Africa, Sri Lanka, Swaziland, Sweden, Tokelau, Turkey, Uganda, Ukraine, United Kingdom, United Republic of Tanzania, Vanuatu, Western Samoa, Yemen Arab Republic, Yugoslavia. V. (2) Afghanistan, Antigua and Barbuda, Bangladesh, Bhutan, Brazil, British Virgin Islands, Bulgaria, Central African Republic, Colombia, Czech and Slovak Federal Republic, Denmark, Dominican Republic, Equatorial Guinea, Ethiopia, Gambia, Germany, Ghana, Guinea-Bissau, Guyana, Honduras, Japan, Kenya, Republic of Korea, Lao People's Democratic Republic, Lebanon, Lesotho, Marshall Islands, Mauritius, Morocco, New Zealand, Nicaragua, Oman, Organization of Eastern Caribbean States, Pacific Islands Developing Countries, Pakistan, Philippines, Poland, Portugal, Qatar, Rwanda, Saudi Arabia, Seychelles, Sierra Leone, Spain, Sudan, Thailand, Tonga, Trinidad and Tobago, Uruguay, Zimbabwe.
Major Descriptors: *POWER GENERATION -- ECONOMIC IMPACT; *POWER GENERATION -- ENVIRONMENTAL IMPACTS
Descriptors: ENVIRONMENT; INDUSTRY; INTERNATIONAL COOPERATION; MEETINGS; TECHNOLOGY IMPACTS
Broader Terms: COOPERATION
Subject Categories: 290200* -- Energy Planning & Policy -- Economics & Sociology
290300 -- Energy Planning & Policy -- Environment, Health, & Safety
INIS Subject Categories: F1500* -- Economic Aspects of Nonnuclear Energy -- (1992-)
C5600 -- Environmental Aspects of Nonnuclear Energy -- (1992-)

10/5/310 (Item 10 from file: 103)
03503909 EDB-93-082784
Title: [Travel to United Kingdom and Germany to evaluate and transfer foreign landfill barrier and stabilization technologies both to and from the US Department of Energy complex sites and to initiate international cooperative waste management and remediation site work between United States private sector and foreign corporations]
Author(s)/Editor(s): Phillips, S.J.
Corporate Source: Westinghouse Hanford Co., Richland, WA (United States)
(Code: 9500104)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Publication Date: 24 Aug 1992 (153 p)
Report Number(s): DOE/FTR-93013119
Order Number: DE93013119
Contract Number (DOE): AC06-87RL10930
Document Type: Report
Language: English
Journal Announcement: EDB9314
Availability: OSTI; NTIS (US Sales Only); GPO Dep.
Distribution: (Report):0 (MF):3 MN-510
Subfile: ERA (Energy Research Abstracts); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: A review of United Kingdom (UK) and German technologies and materials for remediation of radioactive and/or hazardous waste landfill sites was made and documented as a result of a short-term foreign appointment. A working data base of materials for in situ

treatment of landfills was compiled and recorded on DBASE IV software. Alternative technologies and equipment example engineering sketches were made. These illustrations are categorized relative to in situ treatment by physical, chemical, and thermal processes. Data base and technology engineering sketches have been sent to integrated demonstration and integrated program coordinators. A short form technical task plan (TTP) was written by the US and UK research engineers proposing a cooperative US private sector, DOE complex, and UK nuclear industry cooperative technology demonstration. This TTP delineates work to demonstrate contaminated media surface treatment with polymeric and granular materials at atmospheric weapons testing sites in Australia, the Christmas Islands, and the Marshall Islands. Foreign landfill stabilization technologies identified and evaluated for potential application at DOE sites are, for the most part, applicable if site treatment is limited to barrier placement. Further development of in situ treatment technologies that directly access the wasteform or contaminant plumes originating from the wasteform is required. Both UK and German development engineers and scientists are very supportive of cooperative landfill stabilization and general remediation demonstration efforts.

Major Descriptors: *RADIOACTIVE WASTE DISPOSAL -- SANITARY LANDFILLS; *SANITARY LANDFILLS -- STABILIZATION
Descriptors: HAZARDOUS MATERIALS; LINERS; RADIOACTIVE WASTES; REMEDIAL ACTION; TECHNOLOGY TRANSFER; TRAVEL
Broader Terms: MANAGEMENT; MATERIALS; RADIOACTIVE MATERIALS; RADIOACTIVE WASTE MANAGEMENT; WASTE DISPOSAL; WASTE MANAGEMENT; WASTES
Subject Categories: 054000* -- Nuclear Fuels -- Health & Safety
052002 -- Nuclear Fuels -- Waste Disposal & Storage

10/5/311 (Item 11 from file: 103)
03487580 AIX-24-037971; EDB-93-066456
Title: Fall-out of military nuclear explosions: Marshall Islands, Utah and Nevada states
Original Title: Retombees des explosions nucleaires militaires: iles Marshall, etats de l'Utah et du Nevada
Author(s): Galle, P. (Hopital Henri-Mondor, 94 - Creteil (France))
Title: The radioactive iodine irradiation
Original Title: Irradiation par l'iode radioactif
Corporate Source: Electricite de France, 75 - Paris (France). Comite de Radioprotection (Code: 9100336)
Conference Title: EdF Radiation Protection Meeting on Radioactive Iodine Irradiation
Original Conference Title: Journee organisee par le Comite de Radioprotection d'Electricite de France sur l'Irradiation par l'Iode Radioactif
Conference Location: Paris (France) Conference Date: 25 Oct 1991
Publisher: Paris (France) Electricite de France
Publication Date: Feb 1992 p 43-47 ([68] p)
Report Number(s): CONF-9110484--
Document Type: Analytic of a Book; Conference Literature
Language: French
Journal Announcement: EDB9311
Subfile: ETD (Energy Technology Data Exchange). FRN (France (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: France
Country of Publication: France
Abstract: In this article, the author presents 1954 Bikini atoll accident and early and delayed effects on population: non thyroid and thyroid effects (hypothyroidism, nodules) in according to age, radiation doses. In conclusion, the most of late complications are induced by iodine radioisotopes. (5 tabs).
Major Descriptors: *FALLOUT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- DELAYED RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- EARLY RADIATION EFFECTS
Descriptors: ACCIDENTS; BIKINI; DOSE RATES; EPIDEMIOLOGY; FISSION PRODUCT

RELEASE; HYPOTHYROIDISM; IODINE 131; IRRADIATION; NEOPLASMS; NEVADA; PUBLIC HEALTH; RADIATION DOSES; THYROID; UTAH
Broader Terms: BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DAYS LIVING RADIOISOTOPES; DEVELOPED COUNTRIES; DISEASES; DOSES; ENDOCRINE DISEASES ; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NORTH AMERICA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ORGANS; RADIATION EFFECTS; RADIOISOTOPES; USA
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560151 -- Radiation Effects on Animals -- Man
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man
C1500 -- Effects of External Radiation on Man

10/5/312 (Item 12 from file: 103)
03458741 GRA-93-61714; EDB-93-037617
Title: Chernobyl radioactivity impacts and remediation of forest ecosystems
Author(s)/Editor(s): Rennie, C.D.; Baweja, A.S.
Corporate Source: Environment Canada, Ottawa, ON (Canada) (Code: 9698005)
Publication Date: 1992 (21 p)
Report Number(s): MIC-92-07456/XAB
Document Type: Report
Language: English
Journal Announcement: EDB9307
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: Canada
Country of Publication: Canada
Abstract: This report gives an overview of the results of the Chernobyl nuclear accident, the impacts of strontium, cesium, and plutonium on forestry ecosystems, the toxicity of the radionuclides, remediation techniques such as upgrading the soils with the addition of potassium and calcium, and other possible measures for remediation, based primarily on the Bikini Atoll model.
Major Descriptors: *FORESTS -- RADIATION EFFECTS; *NUCLEAR POWER PLANTS -- ACCIDENTS
Descriptors: BIKINI; CALCIUM; CESIUM; FORESTRY; PLUTONIUM; POTASSIUM; REMEDIAL ACTION; SOILS; STRONTIUM; TOXICITY
Broader Terms: ACTINIDES; ALKALI METALS; ALKALINE EARTH METALS; ELEMENTS; ISLANDS; MARSHALL ISLANDS; METALS; MICRONESIA; NUCLEAR FACILITIES; OCEANIA; POWER PLANTS; THERMAL POWER PLANTS; TRANSURANIUM ELEMENTS
Subject Categories: 220900* -- Nuclear Reactor Technology -- Reactor Safety
570100 -- Health & Safety -- Real Accidents -- (1992-)

10/5/313 (Item 13 from file: 103)
03458740 GRA-93-61713; EDB-93-037616
Title: Bibliography on Chernobyl radioactivity impacts and remediation of forest ecosystems
Author(s)/Editor(s): Rennie, C.D.; Baweja, A.S.
Corporate Source: Environment Canada, Ottawa, ON (Canada) (Code: 9698005)
Publication Date: 1992 (11 p)
Report Number(s): MIC-92-07455/XAB
Document Type: Report; Bibliography/Review Article
Language: English
Journal Announcement: EDB9307
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP

Country of Origin: Canada
Country of Publication: Canada
Abstract: Bibliography on the Chernobyl nuclear accident pertaining to radiological sources, distribution of radioactivity, transport of radionuclides in aquatic and terrestrial ecosystems, and biological impacts/indicators. The second section lists references on remediation technologies at Bikini Atoll Islands. References include books and periodicals from Canada, the United States, and European sources.
Major Descriptors: *FORESTS -- RADIATION EFFECTS; *NUCLEAR POWER PLANTS -- ACCIDENTS; *RADIATION EFFECTS -- BIBLIOGRAPHIES
Descriptors: ALLOCATIONS; AQUATIC ECOSYSTEMS; BIKINI; CANADA; EUROPE; RADIOACTIVITY TRANSPORT; REMEDIAL ACTION; TERRESTRIAL ECOSYSTEMS; USA
Broader Terms: DEVELOPED COUNTRIES; DOCUMENT TYPES; ECOSYSTEMS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NORTH AMERICA; NUCLEAR FACILITIES; OCEANIA; POWER PLANTS; THERMAL POWER PLANTS
Subject Categories: 220900* -- Nuclear Reactor Technology -- Reactor Safety
570100 -- Health & Safety -- Real Accidents -- (1992-)

10/5/314 (Item 14 from file: 103)
03449741 EDB-93-028617
Title: Clean soil at Eniwetok and Johnston Atolls
Author(s): Bramlitt, E.T.
Conference Title: American Nuclear Society (ANS) winter meeting
Conference Location: Washington, DC (United States) Conference Date: 11-16 Nov 1990
Source: Transactions of the American Nuclear Society (United States) v 62 . Coden: TANSAO ISSN: 0003-018X
Publication Date: 1990 p 70-71
Report Number(s): CONF-901101--
Document Type: Journal Article; Conference Literature
Language: English
Journal Announcement: EDB9306
Subfile: ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The Defense Nuclear Agency has managed two large-scale soil cleanups (landmass decontaminations) of plutonium contamination. Both are at Pacific Ocean atolls formerly used for nuclear weapons tests. The Eniwetok Atoll (EA) cleanup between 1977 and 1980 evaluated 390 ha of contaminated land and cleaned 50 ha by removing 80,000 m[sup 3] of contaminated soil. The Johnston Atoll (JA) cleanup is in process. It has checked 270 ha, will clean 15 ha, and plans for removal of 80,000 m[sup 3] of soil. The cleanups are similar in other respects including carbonate-based soil, in situ radiation surveys, contamination characteristics, soil excavation methods, safety, and weather. The two cleanups are in contrast relative to planning time, agencies involved, funding, documentation, environmental considerations, cleanup workforce, site beneficiaries, waste characterization, regulatory permits, management, and project duration. The most noteworthy differences are the rationale for cleanup, the cleanup process, the definition of clean, and the cost.
Major Descriptors: *ENIWETOK -- REMEDIAL ACTION; *SOILS -- DECONTAMINATION
Descriptors: ACTIVITY LEVELS; DOCUMENTATION; EXCAVATION; FINANCING; IN-SITU PROCESSING; METEOROLOGY; NUCLEAR EXPLOSIONS; NUCLEAR FACILITIES; NUCLEAR WEAPONS; PACIFIC OCEAN; PLANNING; PLUTONIUM; PROGRAM MANAGEMENT; RADIATION MONITORING; REGULATIONS; SAFETY; SITE CHARACTERIZATION; SURVEILLANCE; TESTING; USA; VOLUME
Broader Terms: ACTINIDES; CLEANING; DEVELOPED COUNTRIES; ELEMENTS; EXPLOSIONS; ISLANDS; MANAGEMENT; MARSHALL ISLANDS; METALS; MICRONESIA; MONITORING; NORTH AMERICA; OCEANIA; PROCESSING; SEAS; SURFACE WATERS; TRANSURANIUM ELEMENTS; WEAPONS
Subject Categories: 054000* -- Nuclear Fuels -- Health & Safety
053000 -- Nuclear Fuels -- Environmental Aspects

5003603

INIS Subject Categories: E2300* -- Reactor Fuels
C5222 -- Environmental aspects of radioactive releases from fission fuel cycle facilities -- (1992-)

10/5/315 (Item 15 from file: 103)
03446824 EDB-93-025700
Title: Fallout: The experiences of a medical team in the care of a Marshallese population accidently exposed to fallout radiation
Author(s)/Editor(s): Conard, R.A.
Corporate Source: Brookhaven National Lab., Upton, NY (United States) (Code: 0936000)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Publication Date: Sep 1992 (72 p)
Report Number(s): BNL-46444
Order Number: DE93004890
Contract Number (DOE): AC02-76CH00016
Document Type: Report
Language: English
Journal Announcement: EDB9305
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-408
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: This report presents an historical account of the experiences of the Brookhaven Medical Team in the examination and treatment of the Marshallese people following their accidental exposure to radioactive fallout in 1954. This is the first time that a population has been heavily exposed to radioactive fallout, and even though this was a tragic mishap, the medical findings have provided valuable information for other accidents involving fallout such as the recent reactor accident at Chernobyl. Noteworthy has been the unexpected importance of radioactive iodine in the fallout in producing thyroid abnormalities.
Major Descriptors: *MARSHALL ISLANDS -- RADIATION ACCIDENTS; *MEDICAL EXAMINATIONS -- HISTORICAL ASPECTS
Descriptors: FALLOUT; HUMAN POPULATIONS
Broader Terms: ACCIDENTS; ISLANDS; MICRONESIA; OCEANIA; POPULATIONS
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450000 -- Military Technology, Weaponry, & National Defense
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man

10/5/316 (Item 16 from file: 103)
03426034 INS-92-038605; EDB-93-004910
Title: Onset conditions for equatorial spread F
Author(s): Mendillo, M.; Baumgardner, J.; Xiaoqing Pi; Sultan, P.J. (Boston Univ., MA (United States)); Tsunoda, R. (SRI International, Menlo Park, CA (United States))
Source: Journal of Geophysical Research (United States) v 97:A9. Coden: JGREA2 ISSN: 0148-0227
Publication Date: 1 Sep 1992 p 13865-13876
Document Type: Journal Article
Language: English
Journal Announcement: EDB9301
Subfile: ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The problem of day-to-day variability in the occurrence of equatorial spread F (ESF) is addressed using multidiagnostic observations and semiempirical modeling. The observational results are

derived from a two-night case study of ESF onset conditions observed at Kwajalein Atoll (Marshall Islands) using the ALTAIR incoherent scatter radar and all-sky optical imaging techniques. The major difference between nights when ESF instabilities did not occur (August 14, 1988) and did occur (August 15, 1988) in the Kwajalein sector was that the northern meridional gradient of 6300-[angstrom] airglow was reduced on the night of limited ESF activity. Modeling results suggest that this unusual airglow pattern is due to equatorward neutral winds. Previous researchers have shown that transequatorial thermospheric winds can exert a control over ESF seasonal and longitudinal occurrence patterns by inhibiting Rayleigh-Taylor instability growth rates. They present evidence to suggest that this picture can be extended to far shorter time scales, namely, that 'surges' in transequatoral winds acting over characteristic times of a few hours to a day can result in a stabilizing influence upon irregularity growth rates. The seemingly capricious nature of ESF onset may thus be controlled, in part, by the inherent variability of low-latitude thermospheric winds.
Major Descriptors: *SPREAD F -- DAILY VARIATIONS
Descriptors: AIRGLOW; INSTABILITY GROWTH RATES; MATHEMATICAL MODELS; RADAR; RAYLEIGH-TAYLOR INSTABILITY; THERMOSPHERE; WIND
Broader Terms: EARTH ATMOSPHERE; F REGION; INSTABILITY; IONOSPHERE; MEASURING INSTRUMENTS; PLANETARY IONOSPHERES; RANGE FINDERS; VARIATIONS
Subject Categories: 661320* -- Auroral, Ionospheric, & Magnetospheric Phenomena -- (1992-)
INIS Subject Categories: B3330* -- Auroral, ionospheric, & magnetospheric phenomena

10/5/317 (Item 17 from file: 103)
03418758 AIX-23-082981; EDB-92-181515
Title: Late medical consequences of exposure to radioactive fallout Rongelap and Utirik 35 years after 'BRAVO'
Author(s): Adams, W.H. (Brookhaven National Lab., Upton, NY (United States). Dept. of Medical)
Conference Title: 3. international conference on low-level measurements of actinides and long-lived radionuclides in biological and environmental samples
Conference Location: Bombay (India) Conference Date: 29 Jan - 2 Feb 1990
Source: Journal of Radioanalytical and Nuclear Chemistry (Switzerland) v 156:2. Coden: JRNCD ISSN: 0236-5731
Publication Date: Jan 1992 p 269-290
Report Number(s): CONF-900125--
Document Type: Journal Article; Conference Literature; Numerical Data
Language: In English
Journal Announcement: EDB9224
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: Hungary
Abstract: Data collected by the Brookhaven Medical Program on the late medical consequences of the exposure to radioactive fallout originated from the detonation of a thermonuclear device on Bikini atoll in Marshall Islands are discussed. (author) 23 refs.; 6 figs.; 9 tabs.
Major Descriptors: *BRAVO EVENT -- DELAYED RADIATION EFFECTS
Descriptors: AGE GROUPS; EXPERIMENTAL DATA; FALLOUT; HEMATOLOGY; HUMAN POPULATIONS; MARSHALL ISLANDS; MEDICAL EXAMINATIONS; NEOPLASMS; RADIATION DOSES; SYMPTOMS; THYROIDITIS; TIME DEPENDENCE
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; CASTLE PROJECT; DATA; DISEASES; DOSES; ENDOCRINE DISEASES; EXPLOSIONS; INFORMATION; ISLANDS; MEDICINE; MICRONESIA; NUCLEAR EXPLOSIONS; NUMERICAL DATA; OCEANIA; POPULATIONS; RADIATION EFFECTS; SURFACE EXPLOSIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560160 -- Radionuclide Effects, Kinetics, & Toxicology
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2100 -- Tissue Distribution, Metabolism, Toxicology & Removal of

Radioisotopes

10/5/318 (Item 18 from file: 103)
03414157 AIX-23-084053; EDB-92-176914
Title: Compensation for the victims of the Marshall Islands nuclear testing programme: the Marshall Islands Nuclear Claims Tribunal
Author(s): Briscoe, W.
Title: Nuclear Inter Jura '91: nuclear law and nuclear energy for the future
Corporate Source: International Nuclear Law Association, Harwell (United Kingdom). British Administrative Committee (Code: 9051134)
Conference Title: Nuclear Inter Jura '91: biennial conference of the International Nuclear Law Association (INLA) - nuclear law and the challenge of the future
Conference Location: Bath (United Kingdom) Conference Date: 22-26 Sep 1991
Publisher: Harwell (United Kingdom) International Nuclear Law Association
Publication Date: 1992 p 367-386 (794 p)
Report Number(s): CONF-910923--
ISBN: 0-7058-1654-0
Document Type: Analytic of a Book; Conference Literature
Language: In English
Journal Announcement: EDB9224
Availability: Available from H.M. Stationery Office,
Subfile: ETD (Energy Technology Data Exchange). GBN (United Kingdom (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: United Kingdom
Country of Publication: United Kingdom
Abstract: The Marshall Islands Nuclear Claims Tribunal was established in 1988 pursuant to legislation enacted by the Republic of the Marshall Islands as part of its obligations under the Compact of Free Association between it and the United States (ratified 1986) and an associated Compact implementation agreement. The Tribunal is generally considered to be the last hope for compensation for a large number of Marshallese who claim to have suffered injury or damage as a result of the United States Nuclear Testing Programme in the Marshall Islands, 1946 - 1958. Under the Compact, the United States admitted liability for injuries and damages suffered by Marshallese as a result of the Testing Programme and made provision for the payment of compensation. In return, the Republic agreed to espouse, on behalf of it and its citizens, all current and future claims for compensation against the United States. The Tribunal has been given a most challenging and unique assignment: - to identify and compensate the victims of the Testing Programme, with a potentially limited sum of money, an indefinite number of victims, and with cultural, environmental and political circumstances which are not altogether conducive to Western concepts associated with compensating people for damages and personal injuries suffered as a result of a wrongful act. The paper will describe the Tribunal's role in compensating the victims of the Testing Programme. It will highlight a number of legal, social and cultural difficulties in establishing and operating a scheme to compensate people for damages and injuries suffered or commenced up to forty years previously. (author).
Major Descriptors: *HARDTACK PROJECT -- VICTIMS COMPENSATION; *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS; *HUMAN POPULATIONS -- MARSHALL ISLANDS; *REDWING PROJECT -- VICTIMS COMPENSATION
Descriptors: LEGISLATION; LOCAL FALLOUT; NUCLEAR EXPLOSIONS; NUCLEAR INSURANCE; NUCLEAR LIABILITY; NUCLEAR WEAPONS; USA
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DEVELOPED COUNTRIES; EXPLOSIONS; FALLOUT; INSURANCE; ISLANDS; LIABILITIES; MICRONESIA; NORTH AMERICA; NUCLEAR EXPLOSIONS; OCEANIA; POPULATIONS; RADIATION EFFECTS; WEAPONS
Subject Categories: 220901* -- Nuclear Reactor Technology -- Reactor Safety -- Accident Liability
INIS Subject Categories: F2500* -- Nuclear Law -- Liability for Nuclear

Damage

10/5/319 (Item 19 from file: 103)
03402566 GRA-92-73050; EDB-92-165323
Title: Definitional mission: Ocean Thermal Energy Conversion, Republic of the Marshall Islands. Export trade information
Author(s)/Editor(s): Dean, S.R.; Ross, J.M. (Code: 9999990)
Publication Date: Sep 1990 (53 p)
Report Number(s): PB-92-216381/XAB
Note: This document was provided to NTIS by the U.S. Trade and Development Program, Rosslyn, VA.
Document Type: Report
Language: In English
Journal Announcement: EDB9222
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: EPA (Energy Abstracts for Policy Analysis); ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of the study was to determine the commercial viability of an Ocean Thermal Energy Conversion (OTEC) electric power plant at the Majuro Atoll in the Marshall Islands. It was concluded that various technology improvements and economic factors have converged to present a feasible opportunity. United States industrial and research organizations are technically capable of developing a commercial OTEC industry for domestic and export markets. It is estimated that 100% of OTEC equipment and services could be supplied by United States firms. However, Japan has aggressively pursued OTEC development with an apparent goal of dominating the export market.
Major Descriptors: *MARSHALL ISLANDS -- OCEAN THERMAL POWER PLANTS; *OCEAN THERMAL POWER PLANTS -- MARKETING RESEARCH
Descriptors: COMPETITION; EXPORTS; FEASIBILITY STUDIES; FINANCING; JAPAN; PLANNING; TECHNOLOGY ASSESSMENT; TRADE; USA
Broader Terms: ASIA; DEVELOPED COUNTRIES; ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; POWER PLANTS; SOLAR POWER PLANTS; THERMAL POWER PLANTS; TRADE
Subject Categories: 140800* -- Solar Energy -- Ocean Energy Systems
299000 -- Energy Planning & Policy -- Unconventional Sources & Power Generation
290200 -- Energy Planning & Policy -- Economics & Sociology

10/5/320 (Item 20 from file: 103)
03392655 EDB-92-155412
Title: Bioremediation case study: Fuel-contaminated soil cleanup in the Marshall Islands
Author(s): Machanoff, R. (Martin Marietta Energy Systems, Inc., Oak Ridge, TN (United States))
Title: WATTec '92. Innovation in the 21st century: Excellence through continuous improvement
Conference Title: 19. annual WATTec interdisciplinary technical conference and exhibition
Conference Location: Knoxville, TN (United States) Conference Date: 18-21 Feb 1992
Publisher: Oak Ridge, TN (US) Sun Graphics Inc.
Publication Date: 1992 p 63 (77 p)
Report Number(s): CONF-920242--
Document Type: Analytic of a Book; Conference Literature
Language: In English
Journal Announcement: EDB9221
Availability: Sun Graphics Inc., 101 East Tyrone Rd., Oak Ridge, TN 37830 (United States)
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: P

Country of Origin: United States
Country of Publication: United States
Abstract: Using microbes to degrade fuels in contaminated soils is becoming increasingly more attractive as an approach to environmental restoration. Removing contamination by traditional methods is costly, does not always eliminate the problem, and often just moves it somewhere else. Biodegradation of contaminants can often be accomplished in situ, resulting in the actual destruction of the contaminants by microbial conversion to harmless by-products. Bioremediation is not applicable to all forms of environmental contamination but has been demonstrated to be particularly effective on petroleum hydrocarbon based fuels. Bioremediation can offer a cost-effective means for site cleanup, particularly where challenging logistical considerations have to be factored into cleanup projects. Logistical considerations have made bioremediation the method of choice for the decontamination of fuel-containing soils on Kwajalein Island, Republic of the Marshall Islands. Kwajalein is located more than 2,100 miles west of Hawaii in the southernmost part of the North Pacific. The site of a major missile range of the Strategic Defense Command (SDC), Kwajalein has been the center of US defense activities for almost 50 years. The island is part of a typical coral atoll and is only 2.5 miles long and 0.5 miles wide. Mission-related activities over the past 5 decades have resulted in about 10% of the island being contaminated with diesel, gasoline, and jet fuels. SDC has executed an agreement with the Department of Energy for the Hazardous Waste Remedial Actions Program (HAZWRAP), a division of Martin Marietta Energy Systems, Inc., to assist the US Army Kwajalein Atoll (USAKA) in the management of the Base restoration activities on Kwajalein Atoll. HAZWRAP initiated sampling and feasibility studies to determine whether bioremediation was a viable choice for site cleanup at USAKA.
Major Descriptors: *HYDROCARBONS -- BIODEGRADATION; *MARSHALL ISLANDS -- LAND POLLUTION; *SOILS -- DECONTAMINATION
Descriptors: DIESEL FUELS; GASOLINE; JET ENGINE FUELS; MICROORGANISMS; REMEDIAL ACTION; SAMPLING
Broader Terms: CHEMICAL REACTIONS; CLEANING; DECOMPOSITION; DISTILLATES; ENERGY SOURCES; FOSSIL FUELS; FUELS; GAS OILS; ISLANDS; LIQUID FUELS; MICRONESIA; OCEANIA; ORGANIC COMPOUNDS; PETROLEUM; PETROLEUM DISTILLATES; PETROLEUM FRACTIONS; PETROLEUM PRODUCTS; POLLUTION
Subject Categories: 020900* -- Petroleum -- Environmental Aspects
540220 -- Environment, Terrestrial -- Chemicals Monitoring & Transport -- (1990-)
560300 -- Chemicals Metabolism & Toxicology
INIS Subject Categories: C5612* -- Environmental aspects of petroleum -- (1992-)
B3150 -- Land -- Chemical effluents--monitoring & transport -- (1992-)
C5230 -- Environmental aspects of chemical & thermal effluent from existing nuclear installations

10/5/321 (Item 21 from file: 103)
03391656 JPN-92-008332; EDB-92-154413
Title: Annual report of National Institute of Radiological Sciences of the fiscal year 1990
Corporate Source: National Inst. of Radiological Sciences, Chiba (Japan) (Code: 4485000)
Publication Date: Jan 1992 (266 p)
Report Number(s): NIRS-AR-34
Order Number: DE93704237
Document Type: Report; Progress Report
Language: In Japanese
Journal Announcement: EDB9220
Availability: OSTI; NTIS; INIS
Distribution: (Report):9 (MF):F MN-000
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan

Country of Publication: Japan
Abstract: This annual report presents the activities of the National Institute of Radiological Sciences in Japan in the fiscal year 1990. The activities are divided into research, technical aids, training, medical services, management affairs at the Nakaminato Laboratory Branch Office, library or editing, international cooperation, and general affairs. Research activities are described under the following sections: (1) special researches covering 'biological risk evaluation in public exposure' and 'exposure assessment in the environment and the public involved in food chain', 'medical use of accelerated heavy ions', and 'survey for the demonstration of dose-response relationships in low dose irradiation'; (2) five assigned researches; (3) ordinary researches concerning physics, pharmacochemistry, biology, genetics, pathology and physiology, cell biology, internal exposure, envionmental science, clinical research, clinical research for radiation injuries, medical use of heavy particles, environmental radiation ecology, and aquatic radiation ecology; (4) risk estimation of radiation; (5) survey for radiation response phenomena in fish and in immunity associated with low dose irradiation; (6) actual surveys for Bikini victims, population doses of medical and occupational exposure, and thorotrast exposure; (7) project research; (8) integrated atomic energy-based technological research; (9) radioactivity survey; (10) research supported by Science and Technology Agency aids; (11) International research cooperation; (12) government-private joint cooperative study. Appendices include the personnel list and the bibliography of articles reported by the staff. (N.K.) 870 refs.
Major Descriptors: *JAPANESE ORGANIZATIONS -- PROGRESS REPORT; *JAPANESE ORGANIZATIONS -- RADIOLOGY
Descriptors: DOSIMETRY; ENVIRONMENTAL TRANSPORT; IMPLEMENTATION; LABORATORIES; LOW DOSE IRRADIATION; MANAGEMENT; NIRS CYCLOTRON; PLANNING; PROBABILISTIC ESTIMATION; RADIATION MONITORING; RESEARCH PROGRAMS; REVIEWS; RISK ASSESSMENT
Broader Terms: ACCELERATORS; CYCLIC ACCELERATORS; CYCLOTRONS; DOCUMENT TYPES; IRRADIATION; ISOCHRONOUS CYCLOTRONS; MASS TRANSFER; MEDICINE; MONITORING; NATIONAL ORGANIZATIONS; NUCLEAR MEDICINE
Subject Categories: 990100* -- Management
560151 -- Radiation Effects on Animals -- Man
550600 -- Medicine
INIS Subject Categories: F6000* -- Miscellaneous
C1500 -- Effects of External Radiation on Man
C6000 -- Radiology & Nuclear Medicine

10/5/322 (Item 22 from file: 103)
03389058 EDB-92-151815
Title: High-speed photography of the first hydrogen-bomb explosion
Author(s)/Editor(s): Brixner, B.
Corporate Source: Los Alamos National Lab., NM (United States) (Code: 9512470)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: 20. international congress on high speed photography and photonics
Conference Location: Victoria (Canada) Conference Date: 25-26 Sep 1992
Publication Date: 1992 (10 p)
Report Number(s): LA-UR-92-2514 CONF-9209188--1
Order Number: DE92040392
Contract Number (DOE): W-7405-ENG-36
Document Type: Report; Conference Literature
Language: In English
Journal Announcement: EDB9220
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-906
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States

Abstract: Obtaining detailed photographs of the early stages of the first hydrogen bomb explosion in 1952 posed a number of problems. First, it was necessary to invent a continuous-access camera which could solve the problem that existing million-picture-per-second cameras were blind most of the time. The solution here was to alter an existing camera design so that two modified cameras could be mounted around a single high-speed rotating mirror. A second problem, acquiring the necessary lenses of precisely specified focal lengths, was solved by obtaining a large number of production lenses from war surplus salvage. A third hurdle to be overcome was to test the new camera at an A-bomb explosion. Finally, it was necessary to solve the almost impossible difficulty of building a safe camera shelter close to a megaton explosion. This paper describes the way these problems were solved. Unfortunately the successful pictures that were taken are sill classified.
Major Descriptors: *EXPLOSIONS -- ULTRAHIGH-SPEED PHOTOGRAPHY
Descriptors: CAMERAS; ENIWETOK; HYDROGEN; MHZ RANGE 01-100; RADIATION PROTECTION
Broader Terms: ELEMENTS; FREQUENCY RANGE; ISLANDS; MARSHALL ISLANDS; MHZ RANGE; MICRONESIA; NONMETALS; OCEANIA; PHOTOGRAPHY
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
440600 -- Optical Instrumentation -- (1990-)

10/5/323 (Item 23 from file: 103)
03373947 JPN-92-007370; EDB-92-136704
Title: Radiation in living environment
Author(s): Ichikawa, R. (Nuclear Safety Research Association, Tokyo (Japan))
Title: Proceedings of the third international symposium on advanced nuclear energy research
Corporate Source: Japan Atomic Energy Research Inst., Tokyo (Japan) (Code: 3413000)
Conference Title: 3. international symposium on advanced nuclear energy research: global, environment and nuclear energy
Conference Location: Mito (Japan) Conference Date: 13-15 Mar 1991
Publication Date: 1991 p 12-21 (462 p)
Report Number(s): INIS-JP-005 CONF-910359--
Order Number: DE92514989
Document Type: Miscellaneous Analytic; Conference Literature
Language: In English
Journal Announcement: EDB9218
Availability: OSTI; NTIS; INIS
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: Japan
Abstract: Aside from the atomic bomb attacks in 1945, the experience of radioactive contamination of human environment was the exposure of a tuna fishing boat to the radioactive fallout of a hydrogen bomb test explosion at Bikini atoll in March, 1954. Thereafter, radioactivity was frequently detected in fishes in central Pacific Ocean. Radioactivity was also detected in rain, which resulted in the contamination of agricultural products. Due to the great concern of general public for the radioactivity in food materials, the government initiated the national program of radioactivity surveillance. Since then, the fallout radioactivity due to nuclear test explosions was the main object surveillance in 1950s and 1960s, but the program was gradually expanded to include natural radiation, the artificial radioactivity due to the peaceful uses of nuclear energy and other special programs. The history of the radioactive contamination of environment, natural radiation, medical exposure, the radioactive fallout due to nuclear tests, nuclear power generation and the Chernobyl accident are reported. (K.I.).
Major Descriptors: *RADIOACTIVITY -- GLOBAL ASPECTS
Descriptors: ANNUAL VARIATIONS; BODY BURDEN; CESIUM 137; CHERNOBYLSK-4

REACTOR; CONTAMINATION; COSMIC RADIATION; ENVIRONMENT; FALLOUT; GAMMA RADIATION; REACTOR ACCIDENTS
Broader Terms: ACCIDENTS; ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; ELECTROMAGNETIC RADIATION; ENRICHED URANIUM REACTORS; GRAPHITE MODERATED REACTORS; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; ISOTOPES; LWGR TYPE REACTORS; NUCLEI; ODD-EVEN NUCLEI; POWER REACTORS; RADIATIONS; RADIOISOTOPES; REACTORS; THERMAL REACTORS; VARIATIONS; WATER COOLED REACTORS; YEARS LIVING RADIOISOTOPES
Subject Categories: 560101* -- Biomedical Sciences, Applied Studies -- Radiation Effects -- Dosimetry & Monitoring -- (1992-)
560151 -- Radiation Effects on Animals -- Man
INIS Subject Categories: C5500* -- Personnel Dosimetry & Monitoring
C1500 -- Effects of External Radiation on Man

10/5/324 (Item 24 from file: 103)
03369935 JPN-92-007488; EDB-92-132692
Title: An observation report on the late effects of the disaster of the Chernobyl nuclear power plant
Author(s): Satow, Yukio; Oguma, Nobuo; Kimura, Akiro (Hiroshima Univ. (Japan). Research Inst. for Nuclear Medicine and Biology); Takeichi, Nobuo; Yamada, Hideo; Rozanskiy, V.; Vasilets, A.; Tachiana, S.; Antipkin, Y.
Source: Hiroshima Igaku (Journal of the Medical Association) (Japan) v 45:2. Coden: HIRGA ISSN: 0367-5904
Publication Date: Feb 1992 p 159-173
Document Type: Journal Article
Language: In Japanese
Journal Announcement: EDB9218
Subfile: ETD (Energy Technology Data Exchange). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: Japan
Abstract: As part of international medical cooperation for the Chernobyl nuclear power plant accident, the authors participated in four fact-finding surveys for the aftermath in May 1990, and May, June, and July 1991. This report gives an outline of the surveys, with the purpose of providing the basic information for the future countermeasures. The focus of this paper is on medical surveys for hematopoietic disease (mainly leukemia), infantile thyroid abnormality, and congenital abnormality. In 8 children undergoing hematopoietic examination, accumulated exposure doses were all one rad or less. Infantile leukemia is discussed in terms of exposure doses, radioactivity, radiation-related leukemic types, and the future management. The results of thyroid examination performed in 40 persons at a hospital in the Ukraine are presented: 17 persons were noted to have sclerosing struma associated with atrophy. Incidence of thyroid cancer, presented from two facilities of the Ukraine and four facilities of the Belorussia, is reported. Thyroid abnormality is discussed in terms of radioiodine, I-131 treatment in Basedow's disease, Bikini nuclear exlosion, Hiroshima and Nagasaki A-bomb survivors, and Chernobyl pediatric survivors. The final topic, congenital abnormality, covers the information on fetal and neonatal death and the occurrence of anomaly obtained from reliable physicians in the Belorussia, and is discussed in terms of exposure doses. Finally, problems encountered in surveys for the aftermath are also mentioned. (N.K.).
Major Descriptors: *CHERNOBYLSK-4 REACTOR -- REACTOR ACCIDENTS; *LEUKEMIA -- DELAYED RADIATION EFFECTS
Descriptors: CARCINOMAS; CONGENITAL MALFORMATIONS; DISEASE INCIDENCE; EPIDEMIOLOGY; HYPERTHYROIDISM; IODINE 131; MEDICAL EXAMINATIONS; NEONATES; RADIATION DOSES; RADIONUCLIDE ADMINISTRATION; THYROID
Broader Terms: ACCIDENTS; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DAYS LIVING RADIOISOTOPES; DISEASES; DOSES; ENDOCRINE DISEASES;

ENDOCRINE GLANDS; ENRICHED URANIUM REACTORS; GLANDS; GRAPHITE MODERATED REACTORS; IMMUNE SYSTEM DISEASES; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; ISOTOPES; LWGR TYPE REACTORS; MALFORMATIONS; NEOPLASMS; NUCLEI; ODD-EVEN NUCLEI; ORGANS; PATHOLOGICAL CHANGES; POWER REACTORS; RADIATION EFFECTS; RADIOISOTOPES; REACTORS; THERMAL REACTORS; WATER COOLED REACTORS
Subject Categories: 210300* -- Power Reactors, Nonbreeding, Graphite Moderated
570100 -- Health & Safety -- Real Accidents -- (1992-)
INIS Subject Categories: E3300* -- Power Reactors, Nonbreeding, Graphite Moderated (GCR, AGR, HTGR, etc types)
C5100 -- Actual Accidents

10/5/325 (Item 25 from file: 103)
03369105 EDB-92-131862
Title: Office of the US Nuclear Waste Negotiator
Author(s): Leroy, D.H.
Conference Title: 1991 Winter meeting of the American Nuclear Society (ANS) session on fundamentals of fusion reactor thermal hydraulics
Conference Location: San Francisco, CA (United States) Conference Date: 10-15 Nov 1991
Source: Transactions of the American Nuclear Society (United States) v 64 . Coden: TANSA ISSN: 0003-018X
Publication Date: Nov 1991 p 152
Report Number(s): CONF-911107--
Document Type: Journal Article; Conference Literature
Language: In English
Journal Announcement: EDB9218
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The Office of the US Nuclear Waste Negotiator was created as an independent federal agency by the US Congress pursuant to the 1987 amendments to the Nuclear Waste Policy Act of 1982. The office, which was authorized by Congress for 5 years following the enactment of the 1987 amendments, is headquartered in Boise, Idaho, and maintains a liaison office in Washington DC. The negotiator is charged with the responsibility of attempting to find a state or Indian tribe willing to host a repository or monitored retrievable storage (MRS) facility at a technically qualified site on reasonable terms. The negotiator is instructed to negotiate with any state or Indian tribe that expresses an interest in hosting a repository or MRS facility. The negotiator will formally submit the negotiated agreement and environmental assessment to Congress, and the agreement will become effective when acted on by Congress and signed by the President into law.
Major Descriptors: *RADIOACTIVE WASTE FACILITIES -- SITE SELECTION; *USA -- RADIOACTIVE WASTE MANAGEMENT
Descriptors: AMERICAN INDIANS; AMERICAN SAMOA; GUAM; HIGH-LEVEL RADIOACTIVE WASTES; IDAHO; MARIANA ISLANDS; MARSHALL ISLANDS; MONITORED RETRIEVABLE STORAGE; NUCLEAR WASTE POLICY ACTS; PUERTO RICO; STATE GOVERNMENT; TRUST TERRITORY OF THE PACIFIC ISLANDS; US DOE; VIRGIN ISLANDS; WASHINGTON DC
Broader Terms: DEVELOPED COUNTRIES; FEDERAL REGION X; GREATER ANTILLES; HUMAN POPULATIONS; ISLANDS; LATIN AMERICA; LAWS; LESSER ANTILLES; MANAGEMENT; MARIANA ISLANDS; MATERIALS; MICRONESIA; MINORITY GROUPS; NATIONAL ORGANIZATIONS; NORTH AMERICA; NUCLEAR FACILITIES; OCEANIA; POPULATIONS; RADIOACTIVE MATERIALS; RADIOACTIVE WASTE MANAGEMENT; RADIOACTIVE WASTE STORAGE; RADIOACTIVE WASTES; SPENT FUEL STORAGE; STORAGE; TRUST TERRITORY OF THE PACIFIC ISLANDS; US ORGANIZATIONS; USA; WASTE DISPOSAL ACTS; WASTE MANAGEMENT; WASTE STORAGE; WASTES; WEST INDIES
Subject Categories: 052000* -- Nuclear Fuels -- Waste Management
053001 -- Nuclear Fuels -- Environmental Aspects -- Siting -- (1992-)
INIS Subject Categories: E5000* -- Waste Management

C5212 -- Environmental aspects of siting of fission fuel cycle facilities -- (1992-)

10/5/326 (Item 26 from file: 103)
03343854 FRD-92-001617; EDB-92-106611
Title: Nuclear and radiological accidents
Original Title: Les accidents nucleaires et radiologiques
Author(s): Nenot, J.C. (CEA Centre d'Etudes Nucleaires de Fontenay-aux-Roses, 92 (FR). Inst. de Protection et de Surete Nucleaire)
Source: Revue Generale Nucleaire (France) v 6. Coden: RGNUD ISSN: 0335-5004
Publication Date: Nov-Dec 1991 p 469-474
Document Type: Journal Article
Language: In French
Journal Announcement: EDB9215
Subfile: ETD (Energy Technology Data Exchange). FRN (France (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: France
Country of Publication: France
Abstract: In this article, Dr J.C. Nenot shows that nuclear and radiological accidents could be avoid or their consequences minimized by means simple prevention dispositions for the man protection and for the equipment. The main accidents analyzed by the author are: Marshall Islands in 1954 (Thermonuclear explosion), Kysthym (Urals) in 1957 (chemical explosion of radioactive wastes), Juarez (Mexico) in 1983 (radiotherapy sources), Chernobyl (Ukraine) in 1986 (reactor accident), Goiania (Brasil) in 1987 (radiotherapy source).
Major Descriptors: *HIGH-LEVEL RADIOACTIVE WASTES -- CHEMICAL EXPLOSIONS; *HIGH-LEVEL RADIOACTIVE WASTES -- RADIATION ACCIDENTS; *RADIATION ACCIDENTS -- RADIATION PROTECTION; *RADIATION SOURCES -- RADIATION ACCIDENTS; *RADIATION SOURCES -- RADIOTHERAPY; *REACTOR ACCIDENTS -- RADIATION ACCIDENTS; *THERMONUCLEAR EXPLOSIONS -- RADIATION ACCIDENTS
Descriptors: CESIUM 137; COBALT 60; EMERGENCY PLANS; HUMAN FACTORS; HUMAN POPULATIONS; INDUSTRIAL ACCIDENTS; IRRADIATION; PERSONNEL; PUBLIC HEALTH; RADIATION DOSES; SURFACE CONTAMINATION
Broader Terms: ACCIDENTS; ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; CONTAMINATION; DOSES; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MATERIALS; MEDICINE; MINUTES LIVING RADIOISOTOPES; NUCLEAR EXPLOSIONS; NUCLEAR MEDICINE; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; POPULATIONS; RADIOACTIVE MATERIALS; RADIOACTIVE WASTES; RADIOISOTOPES; RADIOLOGY; THERAPY; WASTES; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES
Subject Categories: 070604* -- Isotope & Radiation Source Technology -- Environmental Aspects -- Design Basis & Hypothetical Accidents -- (1992-)
220504 -- Nuclear Reactor Technology -- Environmental Aspects -- Design Basis & Hypothetical Accidents -- (1992-)
570100 -- Health & Safety -- Real Accidents -- (1992-)
560101 -- Biomedical Sciences, Applied Studies -- Radiation Effects -- Dosimetry & Monitoring -- (1992-)
INIS Subject Categories: C5243* -- Environmental aspects of design basis & hypothetical accidents at other nuclear installations -- (1992-)
C5241 -- Environmental aspects of design basis & hypothetical accidents at fission reactors -- (1992-)
C5100 -- Actual Accidents
C5500 -- Personnel Dosimetry & Monitoring

10/5/327 (Item 27 from file: 103)
03343473 EDB-92-106230
Title: Bioremediation of petroleum-contaminated soil on Kwajalein Island: Microbiological characterization and biotreatability studies
Author(s)/Editor(s): Adler, H.I. (Oak Ridge Associated Universities, Inc., TN (United States)); Jolley, R.L.; Donaldson, T.L. (Oak Ridge National

Lab., TN (United States)) (comps.)
Corporate Source: Oak Ridge National Lab., TN (United States) (Code: 4832000)
Sponsoring Organization: DOD Department of Defense, Washington, DC (United States)
Publication Date: May 1992 (72 p)
Report Number(s): ORNL/TM-11925
Order Number: DE92014930
Contract Number (DOE): AC05-84OR21400
Document Type: Report
Language: In English
Journal Annóuncement: EDB9215
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-000
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: Bioremediation technology is being evaluated for use on the Kwajalein Atoll, which is located in the Republic of the Marshall Islands. The study was undertaken by the Oak Ridge National Laboratory (ORNL) on behalf of the US Army Kwajalein Atoll (USAKA). During February of 1991, a team from ORNL and The University of Tennessee (UT) visited the USAKA. In addition to making on-site observations regarding microbial abundance and distribution of petroleum contaminants, they brought back to Oak Ridge various soil and water samples for detailed analyses. This report documents the biological studies of these samples and presents observations made during the period from February to April of 1991 by investigators at ORNL, UT, and the Oak Ridge Associated Universities.
Major Descriptors: *PETROLEUM -- BIODEGRADATION; *SOILS -- CONTAMINATION
Descriptors: MICROORGANISMS; OCEANIA; SAMPLING
Broader Terms: CHEMICAL REACTIONS; DECOMPOSITION; ENERGY SOURCES; FOSSIL FUELS; FUELS
Subject Categories: 020900* -- Petroleum -- Environmental Aspects
540250 -- Environment, Terrestrial -- Site Resource & Use Studies -- (1990-)

10/5/328 (Item 28 from file: 103)
03327748 EDB-92-082046
Title: Estimates of the radiological dose to people living on Bikini Island for two weeks while diving in and around the sunken ships in Bikini Lagoon
Author(s)/Editor(s): Robison, W.L.
Corporate Source: Lawrence Livermore National Lab., CA (United States) (Code: 9513035)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Publication Date: Sep 1990 (10 p)
Report Number(s): UCRL-ID-104916
Order Number: DE92011590
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: In English
Journal Announcement: EDB9211
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-702
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: Bikini Island and Bikini Lagoon were contaminated by fallout from nuclear weapons tests conducted at the atoll by the United States from 1946 to 1958. The second test, Baker, of the Crossroads series was an

underwater detonation in 1946 that sank several ships in the lagoon, including the USS Saratoga and the Japanese battleship Nagato. The ships received high-intensity gamma-ray and neutron bombardment from the Baker test, which induced radioactivity in the metal structures. Some of the tests conducted after the Baker shot (there were 21 tests in all) injected contaminated carbonate particles into the air, some of which were deposited across the lagoon surface. Most of this contaminated soil then settled onto the ships' decks and other structures and on the lagoon bottom. These sunken ships provide an interesting location for divers. Recreational diving and swimming in and around the ships raises the question of the potential radiological dose from the radionuclides present in or on the ships and in the lagoon sediments. The purpose of this paper, therefore, is to present an analysis of the potential radiological dose to persons who would dive near the sunken ships and live on Bikini Island for a short period of time.

Major Descriptors: *BIKINI -- FALLOUT DEPOSITS; *FALLOUT DEPOSITS -- SAMPLING; *SHIPS -- RADIATION HAZARDS; *SHIPS -- UNDERWATER

Descriptors: ACTIVITY LEVELS; AMERICIUM 241; BISMUTH 207; CESIUM 137; COBALT 60; EUROPIUM 155; NUCLEAR EXPLOSIONS; RADIATION DOSES; SEDIMENTS

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES ; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DOSES; ELECTRON CAPTURE RADIOISOTOPES; EUROPIUM ISOTOPES; EXPLOSIONS; FALLOUT; HAZARDS; HEALTH HAZARDS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LEVELS; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; SPONTANEOUS FISSION RADIOISOTOPES; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES

Subject Categories: 540330* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1990-)

INIS Subject Categories: B3210* -- Water -- Radioactive materials--monitoring & transport -- (1992-)

10/5/329 (Item 29 from file: 103)

03300396 EDB-92-063153

Title: Fallout: The experiences of a medical team in the care of a Marshallese population accidentally exposed to fallout radiation

Author(s)/Editor(s): Conard, R.A.

Corporate Source: Brookhaven National Lab., Upton, NY (United States) (Code: 0936000)

Sponsoring Organization: DOE USDOE, Washington, DC (United States)

Publication Date: 1991 (116 p)

Report Number(s): BNL-46444

Order Number: DE92007449

Contract Number (DOE): AC02-76CH00016

Document Type: Report

Language: In English

Journal Announcement: EDB9209

Availability: OSTI; NTIS; INIS; GPO Dep.

Distribution: (Report):0 (MF):4 MN-408

Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)

US DOE Project/NonDOE Project: P

Country of Origin: United States

Country of Publication: United States

Abstract: This report presents an historical account of the experiences of the Brookhaven Medical team in the examination and treatment of the Marshallese people following their accidental exposure to radioactive fallout in 1954. This is the first time that a population has been heavily exposed to radioactive fallout, and even though this was a tragic mishap, the medical findings have provided valuable information

for other accidents involving fallout such as the recent reactor accident at Chernobyl. Particularly important has been the unexpected importance of radioactive iodine in the fallout in producing thyroid abnormalities.
Major Descriptors: *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: BRAVO EVENT; FALLOUT; MARSHALL ISLANDS; NEOPLASMS
Broader Terms: BIOLOGICAL EFFECTS; CASTLE PROJECT; DISEASES; EXPLOSIONS; ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; POPULATIONS; RADIATION EFFECTS; SURFACE EXPLOSIONS
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man

10/5/330 (Item 30 from file: 103)
03298951 EDB-92-061708
Title: Enhancement factors for resuspended aerosol radioactivity: Effects of topsoil disturbance
Author(s)/Editor(s): Shinn, J.H.
Corporate Source: Lawrence Livermore National Lab., CA (United States) (Code: 9513035)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: 5. international conference on precipitation scavenging and atmosphere surface exchange process
Conference Location: Richland, WA (United States) Conference Date: 15-19 Jul 1991
Publication Date: Nov 1991 (13 p)
Report Number(s): UCRL-JC-105257 CONF-9107104--23
Order Number: DE92009696
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference Literature
Language: In English
Journal Announcement: EDB9209
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-702
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The enhancement factor for airborne radionuclides resuspended by wind is defined as the ratio of the activity density (Bq g{sup {minus}1}) in the aerosol to the activity density in the underlying surface of contaminated soil. Enhancement factors are useful for assessment of worst-case exposure scenarios and transport conditions, and are one of the criteria for setting environmental standards for radioactivity in soil. This paper presents results of experimental studies where resuspension of {sup 239}Pu was measured when air concentrations were equilibrated to the soil surface. Enhancement factors were observed for several types of man-made disturbances (bulldozer-blading, soil raking, vacuum-cleaning) and natural disturbances (springtime thaw, soil-drying, wildfire). For some cases, enhancement factors are compared over range of geographical locations (Bikini Atoll, California, Nevada, and South Carolina). The particle-size distributions of aerosol activity are compared to particle-size distributions of the underlying soil.
Major Descriptors: *RADIOACTIVE EFFLUENTS -- ENVIRONMENTAL IMPACTS; *SOILS -- CONTAMINATION
Descriptors: AEROSOLS; GEOGRAPHICAL VARIATIONS; PLUTONIUM 239
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; COLLOIDS; DISPERSIONS; EVEN-ODD NUCLEI; HEAVY NUCLEI; ISOTOPES; MATERIALS; NUCLEI; PLUTONIUM ISOTOPES; RADIOACTIVE MATERIALS; RADIOACTIVE WASTES; RADIOISOTOPES; SOLS; SPONTANEOUS FISSION RADIOISOTOPES; VARIATIONS; WASTES; YEARS LIVING RADIOISOTOPES
Subject Categories: 540130* -- Environment, Atmospheric -- Radioactive

Materials Monitoring & Transport -- (1990-)
540230 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)
INIS Subject Categories: B3310* -- Radioactive materials monitoring & transport; meteorology
B3110 -- Radioactive materials monitoring & transport

10/5/331 (Item 31 from file: 103)
03290142 EDB-92-052899
Title: Radiological dose assessments in the northern Marshall Islands (1989--1991)
Author(s)/Editor(s): Sun, L.C.; Meinhold, C.B.; Moorthy, A.R.; Clinton, J.H.; Kaplan, E.
Corporate Source: Brookhaven National Lab., Upton, NY (United States) (Code: 0936000)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: 8. international Radiation Protection Association conference
Conference Location: Montreal (Canada) Conference Date: 17-22 May 1992
Publication Date: Dec 1991 (4 p)
Report Number(s): BNL-45868-Rev.12/91 CONF-920501--12-Rev.1
Order Number: DE92007174
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Conference Literature
Language: In English
Journal Announcement: EDB9208
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-606
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The Republic of the Marshall Islands (RMI) is located in the central Pacific Ocean about 3500 km southeast of Hawaii and 4500 km east of Manila, Philippines. It consists of 34 atolls and 2 coral island, having a total land area of about 180 km{sup 2}, distributed over more than 2.5 {times} 10{sup 6} km{sup 2} of ocean. Between 1946 and 1958 the United States conducted nuclear tests there: 43 at Enewetak and 23 at Bikini. Thirty-three years after the cessation of nuclear testing in the RMI, the impact of these operations on the health and radiological safety of the people living in or planing to return to their contaminated homelands is still an important concern. The present Brookhaven National Laboratory (BNL) Marshall Islands Radiological Safety Program (MIRSP) began in 1987 with funding from the US Department of Energy (DOE). The objectives of the MIRSP are to determine the radionuclides present in the bodies of those people potentially exposed to residual radionuclide from weapon tests and fallout, and to assess their present and lifetime dose from external and internal sources. Field bioassay missions involving whole-body counting (WBC) and urine sample collection have, therefore, been important components of the program. WBC is used to measure {gamma}-emitters, such as {sup 40}K, {sup 60}Co and {sup 137}Cs, present in individuals. Urine samples are used to measure {alpha} and {beta}-emitting nuclides, such as {sup 239}Pu and {sup 90}Sr, that are undetectable by WBC routine methods. 6 refs.
Major Descriptors: *CESIUM 137 -- RADIATION DETECTION; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS; *PLUTONIUM 239 -- RADIATION DETECTION
Descriptors: COBALT 60; POTASSIUM 40; RADIOACTIVITY; STRONTIUM 90; URINE; WHOLE-BODY COUNTING
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKA; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS;

CESIUM ISOTOPES; COBALT ISOTOPES; COUNTING TECHNIQUES; DETECTION; DOSES ; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MATERIALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NANOSEC LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; POTASSIUM ISOTOPES; RADIOISOTOPES; SPONTANEOUS FISSION RADIOISOTOPES; STRONTIUM ISOTOPES; WASTES; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560101 -- Biomedical Sciences, Applied Studies -- Radiation Effects -- Dosimetry & Monitoring -- (1992-)
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man
C5500 -- Personnel Dosimetry & Monitoring

10/5/332 (Item 32 from file: 103)
03290140 EDB-92-052897
Title: Radiological dose assessments in the northern Marshall Islands (1989--1991)
Author(s)/Editor(s): Sun, L.C.; Meinhold, C.B.; Moorthy, A.R.; Clinton, J.H.; Kaplan, E.
Corporate Source: Brookhaven National Lab., Upton, NY (United States) (Code: 0936000)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: 8. international Radiation Protection Association conference
Conference Location: Montreal (Canada) Conference Date: 17-22 May 1992
Publication Date: 1992 (4 p)
Report Number(s): BNL-45868 CONF-920501--12
Order Number: DE92004988
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Conference Literature
Language: In English
Journal Announcement: EDB9208
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-630
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The present Brookhaven National Laboratory (BNL) Marshall Islands Radiological Safety Program (MIRSP) began in 1987 with funding from the US Department of Energy (DOE). The objectives of the MIRSP are to determine the radionuclides present in the bodies of those people potentially exposed to residual radionuclide from weapon tests and fallout, and to assess their present and lifetime dose from external and internal sources. Field bioassay missions involving whole body counting (WBC) and urine sample collection have, therefore, been important components of the program. WBC is used to measure {gamma}-emitters, such as {sup 40}K, {sup 60}Co and {sup 137}Cs, present in individuals. Urine samples are used to measure {alpha} and {beta}-emitting nuclides, such as {sup 239}Pu and {sup 90}Sr, that are undetectable by WBC routine methods.
Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- RADIATION MONITORING
Descriptors: CESIUM 137; COBALT 60; PLUTONIUM 239; POTASSIUM 40; RADIOECOLOGICAL CONCENTRATION; RADIOISOTOPE SCANNING; STRONTIUM 90; URINE
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKA; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS;

CESIUM ISOTOPES; COBALT ISOTOPES; COUNTING TECHNIQUES; DOSES; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MATERIALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; MONITORING; NANOSEC LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; POTASSIUM ISOTOPES; RADIOISOTOPES; SPONTANEOUS FISSION RADIOISOTOPES; STRONTIUM ISOTOPES; WASTES; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
540230 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/333 (Item 33 from file: 103)
03289957 EDB-92-052714
Title: Radiological dose assessments in the northern Marshall Islands (1989--1991)
Author(s)/Editor(s): Sun, L.C.; Meinhold, C.B.; Moorthy, A.R.; Clinton, J.H.; Kaplan, E.
Corporate Source: Brookhaven National Lab., Upton, NY (United States) (Code: 0936000)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: 8. international Radiation Protection Association conference
Conference Location: Montreal (Canada) Conference Date: 17-22 May 1992
Publication Date: Nov 1991 (4 p)
Report Number(s): BNL-45868-Rev. CONF-920501--12-Rev.
Order Number: DE92005378
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Conference Literature
Language: In English
Journal Announcement: EDB9208
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-407
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The Republic of the Marshall Islands (RMI) is located in the central Pacific Ocean about 3500 km southwest of Hawaii and 4500 km east of Manila, Philippines. It consists of 34 atolls and 2 coral islands, having a total land area of about 180 km{sup 2}, distributed over more than 2.5 {times} 10{sup 6} of ocean. Between 1946 and 1958 the United states conducted nuclear tests there: 43 at Enewetak and 23 at Bikini. Thirty-three years after the cessation of nuclear testing in the RMI, the impact of these operations on the health and radiological safety of the people living in or planning to return to their contaminated homelands is still an important concern. The present Brookhaven National Laboratory (BNL) Marshall Islands Radiological Safety Program (MIRSP) began in 1987 with funding from the US Department of Energy (DOE). The objectives of the MIRSP are to determine the radionuclides present in the bodies of those people potentially exposed to residual radionuclide from weapon tests and fallout, and to assess their present and lifetime dose from external and internal sources. Field bioassay missions involving whole-body counting (WBC) and urine sample collection have, therefore, been important components of the program. WBC is used to measure {gamma}-emitters, such as {sup 40}K, {sup 60}Co and {sup 137}Cs, present in individuals. Urine samples are used to measure {alpha} and {beta}-emitting nuclides such as {sup 239}Pu and {sup 90}Sr, that are

undetectable by WBC routine methods.
Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- HUMAN POPULATIONS
Descriptors: BIOASSAY; CESIUM 137; COBALT 60; FALLOUT; NUCLEAR WEAPONS; PLUTONIUM 239; POTASSIUM 40; QUALITATIVE CHEMICAL ANALYSIS; STRONTIUM 90; URINE
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKA; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS; CESIUM ISOTOPES; CHEMICAL ANALYSIS; COBALT ISOTOPES; DOSES; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MATERIALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NANOSEC LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; POTASSIUM ISOTOPES; RADIOISOTOPES; SPONTANEOUS FISSION RADIOISOTOPES; STRONTIUM ISOTOPES; WASTES; WEAPONS; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES
Subject Categories: 560101* -- Biomedical Sciences, Applied Studies -- Radiation Effects -- Dosimetry & Monitoring -- (1992-)
INIS Subject Categories: C5500* -- Personnel Dosimetry & Monitoring

10/5/334 (Item 34 from file: 103)
03281422 EDB-92-044179
Title: ..delta.. sup 18 O values, sup 87 Sr/ sup 86 Sr and Sr/Mg ratios of Late Devonian abiotic marine calcite: Implications for the composition of ancient seawater
Author(s): Carpenter, S.J.; Lohmann, K.C.; Walter, L.M.; Huston, J.G.; Halliday, A.N. (Univ. of Michigan, Ann Arbor (United States)); Holden, P. (Univ. of California, Los Angeles (United States))
Source: Geochimica et Cosmochimica Acta (United States) v 55:7. Coden: GCACA ISSN: 0016-7037
Publication Date: Jul 1991 p 1991-2010
Document Type: Journal Article
Language: In English
Journal Announcement: EDB9207
Subfile: ETD (Energy Technology Data Exchange). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: Late Devonian (Frasnian) abiotic marine calcite has been microsampled and analyzed for {sup 87}Sr/{sup 86}Sr ratios, {delta}{sup 18}O and {delta}{sup 13}C values, and minor element concentrations. Portions of marine cement crystals from the Alberta and Canning Basins have escaped diagenetic alteration and preserve original marine {delta}{sup 18}O values ({minus}4.8{per thousand} {plus minus} 0.5, PDB), {delta}{sup 13}C values (+2.0 to +3.0{per thousand}, PDB), {sup 87}Sr/{sup 86}Sr ratios (0.70805 {plus minus} 3), and Sr/Mg weight ratios (0.04 to 0.05). Marine {sup 87}Sr/{sup 86}Sr ratios are globally consistent and can be correlated within the Alberta Basin, and among the Alberta, Canning, and Williston Basins. Correlation of isotopic and chemical data strengthen the conclusion that marine cements from the Leduc Formation preserve original marine {delta}{sup 18}O values which are 3 to 4{per thousand} lower than those of modern marine cements. These low {delta}{sup 18}O values are best explained by precipitation from {sup 18}O-depleted seawater and not be elevated seawater temperature or diagenetic alteration. For comparison with Devonian data, analogous data were collected from Holocene Mg-calcite and aragonite marine cements from Enewetak Atoll, Marshall Islands. Mg-calcite and aragonite marine cements are in isotopic equilibrium with ambient seawater, and Mg-calcite cements are homogeneous with respect to Sr and Mg contents. Comparison of Sr and Mg contents of analogous Devonian and Holocene marine cements suggests that the Mg/Ca ratio of Late Devonian seawater was significantly lower and that the Sr/Ca ratio was significantly higher than that of modern seawater.

Major Descriptors: *CALCITE -- CHEMICAL COMPOSITION; *CALCITE -- ISOTOPE RATIO; *CALCITE -- PRECIPITATION; *LIMESTONE -- GEOCHEMISTRY
Descriptors: ALBERTA; CEMENTS; COMPARATIVE EVALUATIONS; DEVONIAN PERIOD; DIAGENESIS; GEOLOGIC FORMATIONS; GEOLOGIC HISTORY; MAGNESIUM; SEAWATER; SEDIMENTARY BASINS; STRONTIUM; STRONTIUM 86; STRONTIUM 87
Broader Terms: ALKALINE EARTH ISOTOPES; ALKALINE EARTH METALS; BETA DECAY RADIOISOTOPES; BUILDING MATERIALS; CANADA; CARBONATE MINERALS; CARBONATE ROCKS; CHEMISTRY; DEVELOPED COUNTRIES; ELECTRON CAPTURE RADIOISOTOPES; ELEMENTS; EVALUATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; GEOLOGIC AGES; GEOLOGIC STRUCTURES; HOURS LIVING RADIOISOTOPES; HYDROGEN COMPOUNDS; INTERMEDIATE MASS NUCLEI; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MATERIALS; METALS; MINERALS; NORTH AMERICA; NUCLEI; OXYGEN COMPOUNDS; PALEOZOIC ERA; RADIOISOTOPES; ROCKS; SEDIMENTARY ROCKS; SEPARATION PROCESSES; STABLE ISOTOPES; STRONTIUM ISOTOPES; WATER
Subject Categories: 580000* -- Geosciences

10/5/335 (Item 35 from file: 103)
03260946 GRA-92-02538; EDB-92-023703
Title: Sediment facies of Enewetak Atoll lagoon. Geologic and geophysical investigations of Enewetak Atoll, Republic of the Marshall Islands. Professional paper
Author(s)/Editor(s): Wardlaw, B.R.; Henry, T.W.; Martin, W.E.
Corporate Source: Geological Survey, Alexandria, VA (United States)
(Code: 9514132)
Publication Date: 1991 (68 p)
Report Number(s): PB-92-106244/XAB USGS-PP--1513-B
Note: Library of Congress catalog card no. 90-3379. Prepared in cooperation with Defense Nuclear Agency, Washington, DC.
Document Type: Report; Numerical Data
Language: In English
Journal Announcement: EDB9204
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: Two sets of benthic (bottom-surface) samples were taken from the lagoon on Enewetak Atoll, Republic of the Marshall Islands, during the PEACE Program (1984-1985). These samples were collected to (1) familiarize project geologists with the distribution of sediment types and facies within Enewetak lagoon, (2) increase understanding of the distribution of modern microfaunas in the lagoon, and (3) supplement studies of the sea-floor features both within and near OAK and KOA craters. The benthic sample studies aided both evaluation of the stratigraphic sequence penetrated during the Drilling Phase and interpretation of the litho- and biostratigraphic framework used in analysis of OAK and KOA.
Major Descriptors: *ENIWETOK -- PALEONTOLOGY
Descriptors: BATHYMETRY; BENTHOS; COMPILED DATA; CRATERS; FIELD TESTS; GEOLOGIC SURVEYS; GEOPHYSICS; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; SEA BED; SEDIMENTATION; SEDIMENTS; STRATIGRAPHY; SURFACE WATERS
Broader Terms: AQUATIC ORGANISMS; CAVITIES; DATA; EXPLOSIONS; GEOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; SURVEYS; TESTING
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
580000 -- Geosciences
540210 -- Environment, Terrestrial -- Basic Studies -- (1990-)

10/5/336 (Item 36 from file: 103)
03249749 GRA-91-91743; EDB-92-012506
Title: Larger foraminifer biostratigraphy of PEACE boreholes, Enewetak Atoll, Western Pacific Ocean. Geologic and geophysical investigations of Enewetak Atoll, Republic of the Marshall Islands. Professional paper

Author(s)/Editor(s): Gibson, T.G.; Margerum, R.
Corporate Source: Geological Survey, Alexandria, VA (United States)
(Code: 9514132)
Publication Date: 1991 (20 p)
Report Number(s): PB-92-100825/XAB USGS-PP--1513-D
Note: Library of Congress catalog card no. 91-10889. Prepared in cooperation with Defense Nuclear Agency, Washington, DC.
Document Type: Report
Language: In English
Journal Announcement: EDB9202
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: Larger foraminiferal assemblages, including Lepidocyclina orientalis, Miogypsina thecideaeformis, Miogypsinoides dehaartii, etc., and a smaller foraminifer, Austrotrillina striata, are used to correlate upper Oligocene and lower Miocene strata in the Pacific Atoll Exploration Program (PEACE) boreholes at Enewetak Atoll, Republic of the Marshall Islands, western Pacific Ocean, with the Te and Tf zones of the previously established Tertiary Far East Letter Zonation. Correlation using these two benthic groups is critical because calcareous nannofossils and planktic foraminifers are absent in the lower Miocene strata. Biostratigraphic data from these boreholes delineate a thick (greater than 700 feet) sequence of upper Oligocene and lower Miocene strata corresponding to lower and upper Te zone. These strata document a major period of carbonate accumulation at Enewetak during the Late Oligocene and early Miocene (26 to 18 million years ago).
Major Descriptors: *ENIWETOK -- GEOLOGIC FORMATIONS; *GEOLOGIC FORMATIONS -- PALEONTOLOGY
Descriptors: AGE ESTIMATION; BOREHOLES; CARBONATES; CORRELATIONS; EXPLORATION; FORAMINIFERA; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; STRATIGRAPHY; TERTIARY PERIOD; THICKNESS
Broader Terms: ANIMALS; CARBON COMPOUNDS; CAVITIES; CENOZOIC ERA; DIMENSIONS; EXPLOSIONS; GEOLOGIC AGES; GEOLOGY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MICROORGANISMS; OCEANIA; OXYGEN COMPOUNDS ; PROTOZOA; SARCODINA
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
580000 -- Geosciences
450500 -- Military Technology, Weaponry, & National Defense -- Strategic Defense Initiative -- (1990-)

10/5/337 (Item 37 from file: 103)
03245030 AIX-23-001364; EDB-92-007787
Title: Comparative study of plutonium and americium bioaccumulation from two marine sediments contaminated in the natural environment
Author(s): Hamilton, T.F.; Smith, J.D. (Melbourne Univ., Parkville (Australia). Dept. of Inorganic Chemistry); Fowler, S.W.; LaRosa, J.; Holm, E. (International Atomic Energy Agency, Monaco-Ville (Monaco). Lab. of Marine Radioactivity); Aarkrog, A.; Dahlgaard, H. (Risoe National Lab., Roskilde (Denmark))
Source: Journal of Environmental Radioactivity (United Kingdom) v 14:3.
Coden: JERAE ISSN: 0265-931X
Publication Date: 1991 p 211-223
Document Type: Journal Article
Language: In English
Journal Announcement: EDB9201
Subfile: ETD (Energy Technology Data Exchange). GBN (United Kingdom (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Australia
Country of Publication: United Kingdom

Abstract: Plutonium and americium sediment-animal transfer was studied under controlled laboratory conditions by exposure of the benthic polychaete Nereis diversicolor (O. F. Mueller) to marine sediments contaminated by a nuclear bomb accident (near Thule, Greenland) and nuclear weapons testing (Enewetak Atoll). In both sediment regimes, the bioavailability of plutonium and {sup 241}Am was low, with specific activity in the tissues <1% (dry wt) than in the sediments. Over the first three months, a slight preference in transfer of plutonium over {sup 241}Am occurred and {sup 241}Am uptake from the Thule sediment was enhanced compared to that from lagoon sediments of Enewetak Atoll. Autoradiography studies indicated the presence of hot particles of plutonium in the sediments. The results highlight the importance of purging animals of their gut contents in order to obtain accurate estimates of transuranic transfer from ingested sediments into tissue. It is further suggested that enhanced transuranic uptake by some benthic species could arise from ingestion of highly activity particles and organic-rich detritus present in the sediments. (author).
Major Descriptors: *AMERICIUM 241 -- ANNELIDS; *AMERICIUM 241 -- SEDIMENTS; *AMERICIUM 241 -- UPTAKE; *PLUTONIUM ISOTOPES -- ANNELIDS; *PLUTONIUM ISOTOPES -- SEDIMENTS; *PLUTONIUM ISOTOPES -- UPTAKE
Descriptors: AQUATIC ORGANISMS; CONTAMINATION; FALLOUT; GREENLAND; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; RADIONUCLIDE KINETICS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; EXPLOSIONS; HEAVY NUCLEI; INVERTEBRATES; ISLANDS; ISOTOPES; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; RADIOISOTOPES; SPONTANEOUS FISSION RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560162* -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells
540230 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)

10/5/338 (Item 38 from file: 103)
03244179 EDB-92-006936
Title: Bioremediation demonstration on Kwajalein Island: Site characterization and on-site biotreatability studies
Author(s)/Editor(s): Siegrist, R.L.; Korte, N.E.; Pickering, D.A. (Oak Ridge National Lab., TN (United States)); Phelps, T.J. (Tennessee Univ., Knoxville, TN (United States))
Corporate Source: Oak Ridge National Lab., TN (United States) (Code: 4832000)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Publication Date: Sep 1991 (229 p)
Report Number(s): ORNL/TM-11894
Order Number: DE92002387
Contract Number (DOE): AC05-84OR21400
Note: Environmental Sciences Division Publication No. 3733
Document Type: Report
Language: In English
Journal Announcement: EDB9201
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-402
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: An environmental study was conducted during February 1991 on Kwajalein Island, a US Army Kwajalein Atoll (USAKA) Base in the Republic of the Marshall Islands (RMI). This study was undertaken for the US Department of Energy (DOE) Hazardous Waste Remedial Actions Program (HAZWRAP) acting in behalf of USAKA. The purpose of the study was to determine if selected locations for new construction on Kwajalein Island were contaminated by petroleum hydrocarbons as suspected and, if so, whether bioremediation appeared to be a feasible technology for environmental restoration. Two different sites were

evaluated: (1) the site planned freshwater production facility and (2) a site adjacent to an aboveground diesel fuel storage tank. Within the proposed construction zone for the freshwater production facility (a.k.a desalination plant), total petroleum hydrocarbons (TPH) where either absent or at low levels. Characterization data for another potential construction site adjacent to an aboveground diesel fuel storage tank southeast of the old diesel power plant revealed high concentrations of diesel fuel in the soil and groundwater beneath the site. Results of this investigation indicate that there are petroleum-contaminated soils on Kwajalein Island and bioremediation appears to be a viable environmental restoration technique. Further experimentation and field demonstration are required to determine the design and operating conditions that provide for optimum biodegradation and restoration of the petroleum-contaminated soils. 17 refs., 7 figs., 26 figs.
Major Descriptors: *DIESEL FUELS -- BIODEGRADATION; *SUBSURFACE ENVIRONMENTS -- POLLUTION CONTROL
Descriptors: BIOLOGICAL ADAPTATION; ENVIRONMENTAL IMPACTS; EXPERIMENT PLANNING; FEASIBILITY STUDIES; GROUND WATER; HAZARDOUS MATERIALS; INFORMATION NEEDS; LEAKS; MARSHALL ISLANDS; MICROORGANISMS; MILITARY FACILITIES; SITE CHARACTERIZATION; SOILS; STORAGE FACILITIES; VOLATILE MATTER; WATER TABLES
Broader Terms: CHEMICAL REACTIONS; CONTROL; DECOMPOSITION; HYDROGEN COMPOUNDS; ISLANDS; MATERIALS; MATTER; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; PETROLEUM PRODUCTS; PLANNING; WATER
Subject Categories: 540250* -- Environment, Terrestrial -- Site Resource & Use Studies -- (1990-)
540220 -- Environment, Terrestrial -- Chemicals Monitoring & Transport -- (1990-)
560300 -- Chemicals Metabolism & Toxicology

10/5/339 (Item 39 from file: 103)
03243773 GRA-91-11922; EDB-92-006530
Title: Calcareous nannofossils and planktic foraminifers from Enewetak Atoll, Western Pacific Ocean: Geologic and geophysical investigations of Enewetak Atoll, Republic of the Marshall Islands. Professional paper
Author(s)/Editor(s): Bybell, L.M.; Poore, R.Z.
Corporate Source: Geological Survey, Alexandria, VA (United States) (Code: 9514132)
Publication Date: 1991 (28 p)
Report Number(s): PB-91-239061/XAB USGS-PP--1513-C
Note: Library of Congress catalog card no. 91-10890. Prepared in cooperation with Defense Nuclear Agency, Washington, DC.
Document Type: Report
Language: In English
Journal Announcement: EDB9201
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: Boring of the carbonate sequence at the northern end of Enewetak Atoll, Republic of the Marshall Islands, was conducted in 1985, as part of the Pacific Enewetak Atoll Crater Exploration (PEACE) Program. The overall goal of the program was to characterize physical effects of large-scale nuclear blasts, which were conducted in the early 1950's, on the sediments of the atoll. In the report the authors document the occurrences of stratigraphically diagnostic planktic microfossils in samples from Enewetak (generally referred to as core) and outline the rationale for incorporating all available diagnostic planktic assemblages into a composite sequence that was used to date the Enewetak benthic zonation.
Major Descriptors: *ENIWETOK -- GEOLOGIC SURVEYS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: CARBONATE ROCKS; FORAMINIFERA; FOSSILS; GEOPHYSICAL SURVEYS;

Country of Publication: Japan
Abstract: This annual report presents the activities of the National Institute of Radiological Sciences in Japan in the fiscal year 1989. The activities are divided into research, technical aids, training, medical services, management, library or editing, and international cooperation. Research activities are described under the following sections: (I) newly started special researches for 'biological risk evaluation in public exposure' and 'exposure assessment in the environment and the public involved in food chain', and the continuing special research for 'medical use of accelerated heavy ions'; (II) six assigned researches; (III) ordinary researches concerning physics, pharmachochemistry, biology, genetics, pathology and physiology, cell biology, internal exposure, environmental science, clinical research, clinical research for radiation injuries, medical use of heavy particles, environmental radiation ecology, and aquatic radiation ecology; (IV) risk estimation of radiation; (V) actual surveys for Bikini victims, population doses of medical and occupational exposure, and thorotrast exposure; (VI) project research; (VII) radioactivity survey; (VIII) research supported by Science and Technology Agency aids. Appendices include the personnel list and the bibliography of articles reported by the staff. (N.K.) 809 refs.
Major Descriptors: *JAPANESE ORGANIZATIONS -- RADIOLOGY; *JAPANESE ORGANIZATIONS -- RESEARCH PROGRAMS; *RADIOLOGY -- JAPANESE ORGANIZATIONS; *RADIOLOGY -- RESEARCH PROGRAMS
Descriptors: DOSIMETRY; ENVIRONMENTAL TRANSPORT; IMPLEMENTATION; LABORATORIES; MANAGEMENT; NIRS CYCLOTRON; PLANNING; PROBABILISTIC ESTIMATION; PROGRESS REPORT; RADIATION MONITORING; REVIEWS; RISK ASSESSMENT
Broader Terms: ACCELERATORS; CYCLIC ACCELERATORS; CYCLOTRONS; DOCUMENT TYPES; ISOCHRONOUS CYCLOTRONS; MASS TRANSFER; MEDICINE; MONITORING; NATIONAL ORGANIZATIONS; NUCLEAR MEDICINE
Subject Categories: 990100* -- Management

10/5/343 (Item 43 from file: 103)
03212214 EDB-91-139650
Title: A guidebook to alternative energy projects on American Samoa, The Commonwealth of the Northern Mariana Islands, The Federated States of Micronesia, Guam, and The Republics of the Marshall Islands and Palau
(Contains bibliography)
Author(s)/Editor(s): Case, C.W.
Corporate Source: Golden Gate Energy Center, Sausalito, CA (United States) Xavier High School, Moen, Truk (Micronesia) (Code: 9529827; 9902941)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Publication Date: May 1987 (143 p)
Report Number(s): DOE/SF/11634-T1
Order Number: DE91018875
Contract Number (DOE): FG03-81SF11634
Contract Number (Non-DOE): C60161
Document Type: Report
Language: In English
Journal Announcement: EDB9121
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-270; MN-261; MN-246
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this guidebook is to help transfer information concerning alternative energy projects that have been tried on the Pacific islands affiliated with the US. These islands include those in American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia (Kosrae, Pohnpei, Truk, and Yap), Guam, and the Republics of the Marshall Islands and Palau. Distances are long

the transfer of information particularly difficult. A project that works on American Samoa might be appropriate for Yap, but to get this information to the proper people on Yap in a reasonable period of time is extremely difficult. This book describes 100 alternative energy projects that have been tried on the islands since the mid-1970's. This description and record of what has been done to date should be a source of ideas for energy workers, reduce duplication of work, and help encourage successes by describing other successes and failures. Alternative energy projects are projects that use indigenous, renewable resources in order to reduce local dependency on imported petroleum for electricity or liquid fuels. The islands have an apparent abundance of natural resources for this purpose such as the sun, rivers, vegetation, the ocean, and wind; and, ideally, it should be relatively simple to convert these resources to electricity or fuel. However, there are problems unique to the remote, tropical Pacific that often appear insurmountable, and successes to date are the results of unusual persistence, hard work, and ingenuity of those on the islands. Projects are confined to those that actually develop or demonstrate hardware. These projects use the complete spectrum of alternative technologies such as biomass conversion, wind electric, solar water heating, photovoltaics, wind water pumping, hydroelectric, water desalination, and integrated systems. 381 refs., 85 figs.

Major Descriptors: *BIOGAS PROCESS -- DEMONSTRATION PROGRAMS; *BIOMASS -- DEMONSTRATION PROGRAMS; *HYDROELECTRIC POWER -- DEMONSTRATION PROGRAMS; *RENEWABLE RESOURCES -- DEMONSTRATION PROGRAMS; *SOLAR ENERGY -- DEMONSTRATION PROGRAMS; *WIND TURBINES -- DEMONSTRATION PROGRAMS

Descriptors: AMERICAN SAMOA; BIOMASS PLANTATIONS; CHARCOAL; GRANTS; GUAM; MARIANA ISLANDS; MARSHALL ISLANDS; MICRONESIA; PALAU; PHOTOVOLTAIC POWER SUPPLIES; SOLAR CELL ARRAYS; SOLAR WATER HEATING; TRUST TERRITORY OF THE PACIFIC ISLANDS; WIND POWER; WIND-POWERED PUMPS

Broader Terms: ADSORBENTS; ALLOYS; ANAEROBIC DIGESTION; BIOCONVERSION; DEVELOPED COUNTRIES; DIGESTION; ELECTRIC POWER; ELECTRONIC EQUIPMENT; ENERGY; ENERGY SOURCES; EQUIPMENT; GOLD ALLOYS; GOLD BASE ALLOYS; HEATING; ISLANDS; MACHINERY; MANAGEMENT; MARIANA ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; PALLADIUM ALLOYS; PLATINUM METAL ALLOYS; POWER; POWER SUPPLIES; PROCESSING; PUMPS; RENEWABLE ENERGY SOURCES; RESOURCES; SOLAR EQUIPMENT; SOLAR HEATING; TRUST TERRITORY OF THE PACIFIC ISLANDS; TURBINES; TURBOMACHINERY; USA; WASTE MANAGEMENT; WASTE PROCESSING; WATER HEATING

Subject Categories: 299000* -- Energy Planning & Policy -- Unconventional Sources & Power Generation
290400 -- Energy Planning & Policy -- Energy Resources

10/5/344 (Item 44 from file: 103)
03192468 EDB-91-119904

Title: Clinal morphological variation along a depth gradient in the living scleractinian reef coral Favia pallida: Effects on perceived evolutionary tempos in the fossil record

Author(s): Cuffey, R.J. (Pennsylvania State Univ., University Park (USA)); Pachut, J.F. (Indiana Univ.-Purdue Univ., Indianapolis (USA))

Source: Palaois (United States) v 5:6. Coden: PALAE

Publication Date: Dec 1990 p 580-588

Document Type: Journal Article

Language: In English

Journal Announcement: EDB9118

Subfile: ETD (Energy Technology Data Exchange). JMT (DOE contractor)

US DOE Project/NonDOE Project: NP

Country of Origin: United States

Country of Publication: United States

5003686

Abstract: The Holocene reef-building coral Favia pallida was sampled at 4.5 m depth increments (to 40 m) from two reefs on Enewetak Atoll to examine intraspecific environmental effects. An exposed outer reef was massive and wall-like, whereas a sheltered lagoonal reef grew as a slender pinnacle. Corallite diameter and growth rate, two attributes retrievable in fossil corals, were measured with data partitioned into

subsets. Highly significant differences between depth zone populations were found for both corallite diameters and growth rates in analyses of individual and combined reef data sets. Canonical variates analyses (CVA) separated populations from depth zones along single, highly significant, functions. Centroids and 95% confidence intervals, calculated from CVA scores of colonies in each population, are widely separated for the lagoon reef and combined data sets. Conversely, populations from shallow and intermediate depths on the outer reef display overlapping confidence bars indicative of more gradational morphologic changes. When CV's were used to classify specimens to groups, misassignments of intermediate depth specimens to shallow or deep-water populations underscored the gradational nature of the environment. Completely intergrading populations of Favia pallida collected from different depths can be morphologically separated into statistically distinct groupings. A stratigraphic succession of such morphotypes might be interpreted as abruptly appearing separate species if sampling were not as uniform, systematic, and detailed as was possible on modern reefs. Analyses of evolutionary patterns must carefully assess potential effects of clinal variation if past evolutionary patterns are to be interpreted correctly.
Major Descriptors: *COASTAL REGIONS -- GEOMORPHOLOGY; *CORALS -- MORPHOLOGY ; *ENIWETOK -- COASTAL REGIONS
Descriptors: CLASSIFICATION; CLIMATES; CORRELATIONS; DEPTH; ENVIRONMENTAL EFFECTS; GEOLOGIC HISTORY; QUATERNARY PERIOD; REEFS; SAMPLING; STRATIGRAPHY; VARIATIONS
Broader Terms: ANIMALS; CENOZOIC ERA; CNIDARIA; COELENTERATA; DIMENSIONS; GEOLOGIC AGES; GEOLOGIC STRUCTURES; GEOLOGY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 580000* -- Geosciences

10/5/345 (Item 45 from file: 103)
03183056 EDB-91-110492
Title: Introduction: Enewetak Atoll and the PEACE program
Author(s): Henry, T.W.; Wardlaw, B.R.
(Pacific Enewetak Atoll Crater Exploration)
Source: United States Geological Survey, Professional Paper (USA) v 1513-A. Coden: XGPPA
Publication Date: 1990 p A1-A29
Document Type: Journal Article
Language: In English
Journal Announcement: EDB9117
Subfile: ETD (Energy Technology Data Exchange). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: An extensive study was made from June 1984 through August 1985 of the surface and subsurface configurations of two large nuclear craters on the northern side of Enewetak Atoll, Republic of the Marshall Islands. These craters, KOA and OAK, resulted from the near-surface detonation of two high-yield thermonuclear devices in 1958, when the atoll was part of the Pacific Proving Grounds. This multidisciplinary study was designed to produce a broad well-documented geologic, geophysical, and materials-properties data base for use in answering critical questions concerning craters formed by high-yield bursts. The study was part of a larger research initiative by the US Department of Defense to better understand high-yield, strategic-scale nuclear bursts and how Pacific Proving Grounds craters relate to the basing and targeting of nuclear-weapon systems and related national defense issues. The data gathered during the study of the Enewetak craters are applicable to many scientific topics well beyond cratering mechanics and other related strategic concerns of the US DOD. These scientific topics include the geologic evolution of the Pacific Basin, the biologic and geologic history of a coral atoll, the fluctuation of sea level in response to glaciation and deglaciation, the diagenetic history of carbonate rocks in relation to sea-level changes and the

and migration of marine biotas, and the biostratigraphic succession of biotas through time and the calibration of these events with an absolute isotopic time scale, to name a few.
Major Descriptors: *CRATERS -- GEOLOGIC SURVEYS; *CRATERS -- GEOPHYSICAL SURVEYS; *ENIWETOK -- CRATERS
Descriptors: BLAST EFFECTS; CALIBRATION; CARBONATE ROCKS; CRATERING EXPLOSIONS; DIAGENESIS; ENVIRONMENTAL TRANSPORT; FLUCTUATIONS; GEOCHEMISTRY; GEOLOGIC HISTORY; GLACIERS; NUCLEAR WEAPONS; PALEONTOLOGY ; ROCK MECHANICS; SEA LEVEL; STRATIGRAPHY; THERMONUCLEAR EXPLOSIONS; US DOD
Broader Terms: CAVITIES; CHEMISTRY; EXPLOSIONS; GEOLOGY; ISLANDS; LEVELS; MARSHALL ISLANDS; MASS TRANSFER; MECHANICS; MICRONESIA; NATIONAL ORGANIZATIONS; NUCLEAR EXPLOSIONS; OCEANIA; ROCKS; SEDIMENTARY ROCKS; SURVEYS; US ORGANIZATIONS; VARIATIONS; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
580000 -- Geosciences

10/5/346 (Item 46 from file: 103)
03161446 JPN-91-006114; EDB-91-098882
Title: Investigation of radioactivities on the wood samples taken from a fishing boat, the 5th Sumiyoshimaru
Author(s): Shizuma, Kiyoshi; Iwatani, Kazuo; Hasai, Hiromi (Hiroshima Univ., Higashi-Hiroshima (Japan). Faculty of Engineering)
Source: Hiroshima Daigaku Kogakubu Kenkyu Hokoku (Bulletin of the Faculty of Engineerings, Hiroshima University) (Japan) v 39:2. Coden: HIDKA
ISSN: 0018-2060
Publication Date: Mar 1991 p 159-164
Document Type: Journal Article
Language: In Japanese
Journal Announcement: EDB9116
Subfile: ETD (Energy Technology Data Exchange). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: Japan
Abstract: Radioactivity survey has been performed on samples taken from a fishing boat, the 5th Sumiyoshimaru. This boat has been presumed to be exposed to the fallout of Bikini hydrogen bomb test. Gamma-ray measurements have been carried out for six wood samples and two soil samples. Since the {sup 137}Cs concentration estimated for all samples were comparable to the fallout of the nuclear test, it was hard to judge whether the boat was definitely exposed to the Bikini fallout. (author).
Major Descriptors: *FALLOUT -- BIKINI; *NUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: AMERICIUM 241; CESIUM 137; COBALT 60; EUROPIUM 155; GAMMA SPECTROSCOPY; RADIATION DOSES; RADIOACTIVITY; SAMPLING; SHIPS; SOILS; WOOD
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES ; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DOSES; EUROPIUM ISOTOPES; EXPLOSIONS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; SPECTROSCOPY; SPONTANEOUS FISSION RADIOISOTOPES; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES
Subject Categories: 220900* -- Nuclear Reactor Technology -- Reactor Safety

10/5/347 (Item 47 from file: 103)
03157755 EDB-91-095191
Title: Bikini, Enewetak, and Rongelap Marshallese, and United States nuclear weapons testing in the Marshall Islands: A bibliography

(USA)); Schultz, S.C. (Oregon Univ., Eugene, OR (USA)); Robison, W.L. (ed.) (Lawrence Livermore National Lab., CA (USA))
Corporate Source: Lawrence Livermore National Lab., CA (USA) (Code: 9513035)
Sponsoring Organization: DOE USDOE, Washington, DC (USA)
Publication Date: May 1991 (58 p)
Report Number(s): UCRL-ID-105719-Rev.1
Order Number: DE91014111
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Bibliography/Review Article
Language: In English
Journal Announcement: EDB9115
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-705
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: A considerable literature exists on the Bikini, Enewetak, and Rongelap Marshallese and their atolls; however, this literature consists of a large number of governmental documents that are relatively unknown and difficult to locate. This is particularly true of the documents of the Trust Territory of the Pacific Islands and those related to nuclear weapons testing in the Marshall Islands. Because a comprehensive bibliography on the impact of nuclear weapons testing on the Marshallese and their atolls does not exist, the preparation of a bibliography that includes sufficient information to locate all types of reports seems justified. This document is the bibliography.
Major Descriptors: *NUCLEAR EXPLOSIVES
Descriptors: BIBLIOGRAPHIES; BIKINI; ENIWETOK; MARSHALL ISLANDS
Broader Terms: DOCUMENT TYPES; EXPLOSIVES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/348 (Item 48 from file: 103)
03157754 EDB-91-095190
Title: Bikini, Enewetak, and Rongelap Marshallese, and United States nuclear weapons testing in the Marshall Islands: A bibliography
Author(s)/Editor(s): Robison, W.L. (ed.) (Lawrence Livermore National Lab., CA (USA)); Schultz, V. (Washington State Univ., Pullman, WA (USA)); Schultz, S.C. (Oregon Univ., Eugene, OR (USA))
Corporate Source: Lawrence Livermore National Lab., CA (USA) (Code: 9513035)
Sponsoring Organization: DOE USDOE, Washington, DC (USA)
Publication Date: Apr 1991 (57 p)
Report Number(s): UCRL-ID-105719
Order Number: DE91013984
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Bibliography/Review Article
Language: In English
Journal Announcement: EDB9115
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-702
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: A considerable literature exists on the Bikini, Enewetak, and Rongelap Marshallese and their atolls; however, this literature consists of a large number of governmental documents that are relatively unknown and difficult to locate. This is particularly true

those related to nuclear weapons testing in the Marshall Islands. Because a comprehensive bibliography on the impact of nuclear weapons testing on the Marshallese and their atolls does not exist, the preparation of a bibliography that includes sufficient information to locate all types of reports seems justified. Primary sources of information in preparing this bibliography were bibliographies on Oceania, citations in published papers, CIS Index and Abstracts, Monthly Catalog of United States Government Publications, Nuclear Science Abstracts, Energy Research Abstracts, numerous bibliographies on radiation ecology, and suggestions by many individuals whom we contacted. One goal in this bibliography is to include complete documentation of the source of congressional reports and other government-related publications. In addition, page numbers for material in this bibliography are provided in parentheses when the subject matter of a book or document is not restricted to nuclear weapons testing in the Marshall Islands.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BIBLIOGRAPHIES
Descriptors: NUCLEAR WEAPONS; OCEANIA
Broader Terms: DOCUMENT TYPES; EXPLOSIONS; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/349 (Item 49 from file: 103)
03153683 GRA-91-00782; EDB-91-091119
Title: Modelling and observations of the equatorial ionosphere. Rept. for 1 Oct 87-30 Sep 88
Author(s)/Editor(s): Mendillo, M.
Corporate Source: Boston Univ., MA (USA). Center for Space Physics (Code: 9527830)
Publication Date: 10 Oct 1990 (20 p)
Report Number(s): AD-A-230631/4/XAB SCIENTIFIC--1
Contract Number (Non-DOE): F19628-86-K-0026
Document Type: Report
Language: In English
Journal Announcement: EDB9114
Availability: NTIS
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The equatorial ionosphere experiences one of the most severe forms of a geophysical plasma instability - a phenomenon known as spread F. An observational campaign was organized to bring a complement of diagnostic instruments to two sites in the western Pacific sector (Kwajalein Atoll in the Marshall Islands and Wake Island) for a period of coordinated optical and radio measurements o spread F phenomena in August 1988. All-sky optical imaging observations were conducted from 2-16 August in conjunction with ALTAIR radar observations on Kwajalein. Preliminary review of the data sets obtained identified at least five case study events for detailed investigation.
Major Descriptors: *SPREAD F -- MONITORING
Descriptors: DATA; GEOPHYSICS; IMAGES; INCOHERENT SCATTERING; IONOSPHERE; ISLANDS; MARSHALL ISLANDS; PACIFIC OCEAN; PLASMA; PLASMA INSTABILITY; RADAR; RADIOWAVE RADIATION; VISIBLE RADIATION
Broader Terms: EARTH ATMOSPHERE; ELECTROMAGNETIC RADIATION; F REGION; INFORMATION; INSTABILITY; IONOSPHERE; ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; OCEANIA; PLANETARY IONOSPHERES; RADIATIONS; RANGE FINDERS; SCATTERING; SEAS; SURFACE WATERS
Subject Categories: 640201* -- Atmospheric Physics -- Auroral, Ionospheric, & Magetospheric Phenomena

5003690

10/5/350 (Item 50 from file: 103)
03148784 AIX-22-043442; EDB-91-086220
Title: Transuranium elements in the environment

University (Japan))
Source: Radiation Protection (Taiyuan) (Fushe Fanghu) (China) v 10:2.
Coden: FUFAE ISSN: 1000-8187
Publication Date: Mar 1990 p 81-90
Document Type: Journal Article
Language: In Chinese
Journal Announcement: EDB9113
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: China
Abstract: Research activities on distribution and behaviour of transuranium elements in the environment at the Kanazawa University, Japan, were presented. Using new developed radiochemical analysis methods and instruments, and collecting the surface soil samples from various areas of Japan, sediments on the bottom of lake and sea, sea water and those samples related to the Bikini event happened in 1954, the content of plutonium isotopes, {sup 241}Am and {sup 237}Np in environmental sample, their depth profile variation with time and the relationship between them with organic materials were studied.
Major Descriptors: *AMERICIUM 241 -- ENVIRONMENTAL MATERIALS; *AMERICIUM 241 -- RADIATION MONITORING; *NEPTUNIUM 237 -- ENVIRONMENTAL MATERIALS; *NEPTUNIUM 237 -- RADIATION MONITORING; *PLUTONIUM ISOTOPES -- ENVIRONMENTAL MATERIALS; *PLUTONIUM ISOTOPES -- RADIATION MONITORING
Descriptors: ACTIVITY LEVELS; JAPAN; RADIOACTIVITY; SEDIMENTS; SOILS; WATER
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ASIA; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MATERIALS; MONITORING; NANOSEC LIVING RADIOISOTOPES; NEPTUNIUM ISOTOPES; NUCLEI; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 655003* -- Medical Physics -- Dosimetry

10/5/351 (Item 51 from file: 103)
03128046 EDB-91-065481
Title: Bomb tests attack the food chain
Author(s): Ruff, T. (Monash Medical School, Melbourne (Australia))
Source: Bulletin of the Atomic Scientists (USA) v 46:2. Coden: BASIA
ISSN: 0096-5243
Publication Date: Mar 1990 p 32-34
Document Type: Journal Article
Language: In English
Journal Announcement: EDB9111
Subfile: ETD (Energy Technology Data Exchange). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: Australia
Country of Publication: United States
Abstract: Ciguatera poisoning, the most common type of fish poisoning in the world, has become a major public health problem in some parts of the South Pacific. This area has always been the site of periodic outbreaks, especially after severe storms or natural disasters that damage core reefs. But since World War II it has become evident that military activities and major construction projects that wreak havoc on corals also lead to ciguatera outbreaks. Extraordinarily high rates of ciguatera poisoning have occurred on the small Pacific islands that have been used for nuclear tests and on the islands that host the military infrastructures and activities that accompany the tests. This is true for both the Marshall Islands near Bikini and Eniwetok, where U.S. tests took place, and in French Polynesia, in the area around Moruroa Atoll where the French government continues to test. Ciguatera poisoning has a disastrous effect on people who depend on fishing as a way of life and on fish as the major source of protein. 10 refs.
Major Descriptors: *FISHES -- POISONING; *FOOD CHAINS -- BIOLOGICAL RADIATION EFFECTS; *NUCLEAR WEAPONS -- TESTING; *OCEANIA -- FOOD CHAINS

Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGICAL EFFECTS; RADIATION EFFECTS; VERTEBRATES; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
560100 -- Biomedical Sciences, Applied Studies -- Radiation Effects

10/5/352 (Item 52 from file: 103)
03115948 INS-91-009204; EDB-91-053382
Title: Contemporary distributions of Cs-137 in Marshall Islands soils
Author(s): Hamilton, T.; Rosenstock, L. (Univ. of Washington, Seattle (USA)); Greenhouse, N.A.
Title: The 1989 international chemical congress of Pacific Basin Societies: Abstracts of papers, Parts I and II
Conference Title: PACIFICHEM '89: international chemical congress of Pacific Basin Societies
Conference Location: Honolulu, HI (USA) Conference Date: 17-22 Dec 1989
Publisher: Washington, DC (US) American Chemical Society
Publication Date: 1989 p 716-717, Paper INOR 717 (1700 p)
Report Number(s): CONF-891206--
Document Type: Analytic of a Book; Conference Literature
Language: In English
Journal Announcement: EDB9109
Subfile: ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: Atmospheric tests of nuclear weapons ranging from tens of kT to 15 MT of TNT were conducted by the United States at two sites in the northern Marshall Islands. The test areas are now parts of the Republic of the Marshall Islands. Resolutions of health related problems or property damage resulting from the weapons tests were assumed by a Nuclear Claims Tribunal which was funded for this purpose. This paper describes the results of a survey conducted in 1988 which was designed to determine whether a potential connection exists between local fallout and the incidence of radiogenic disease among Marshallese residents of islands in the greater vicinity of the two test areas. Soil samples were collected from two southern atolls as controls, and from five northern sites to look for higher cesium-137 levels which may have been contributed by tropospheric fallout from the weapons tests.
Major Descriptors: *CESIUM 137 -- ECOLOGICAL CONCENTRATION; *MARSHALL ISLANDS -- SOIL CHEMISTRY
Descriptors: BIOLOGICAL RADIATION EFFECTS; HEALTH HAZARDS; LOCAL FALLOUT; NUCLEAR WEAPONS; PERFORMANCE TESTING
Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; CESIUM ISOTOPES; CHEMISTRY; FALLOUT; HAZARDS; ISLANDS; ISOTOPES; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; RADIATION EFFECTS; RADIOISOTOPES; TESTING; WEAPONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 540230* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/353 (Item 53 from file: 103)
03115764 EDB-91-053198; NTS-91-012030; ERA-16-015214
Title: Announced United States nuclear tests, July 1945--December 1990
Corporate Source: USDOE Nevada Operations Office, Las Vegas, NV (USA). Office of External Affairs (Code: 9524009)
Sponsoring Organization: DOE USDOE, Washington, DC (USA)
Publication Date: Jan 1991 (134 p)
Report Number(s): DOE/NV-209-Rev.11
Order Number: DE91009062 5003692
Document Type: Report
Language: In English

Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-700
Subfile: ERA (Energy Research Abstracts); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: This document lists chronologically and alphabetically by event name all nuclear tests conducted and announced by the United States from July 1945 to December 1990 with the exception of the GMX experiments. Discussion is included on test dates, test series, test yields, test locations, test types and purposes, test totals for Nevada Test Site (NTS) detection of radioactivity from NTS events, and categorization of NTS nuclear tests. Briefly discussed are agreements between the US and the Soviet Union regarding test banning. (MB)
Major Descriptors: *NUCLEAR EXPLOSIONS -- HISTORICAL ASPECTS; *USA -- NUCLEAR EXPLOSIONS
Descriptors: ALEUTIAN ISLANDS; ANVIL PROJECT; ARBOR PROJECT; ARGUS EVENT; ATLANTIC OCEAN; ATMOSPHERIC EXPLOSIONS; BEDROCK PROJECT; BOWLINE OPERATION; CASTLE PROJECT; CROSSROADS PROJECT; CROSSTIE OPERATION; DETONATIONS; DOMINIC PROJECT; EMERY OPERATION; FULCRUM OPERATION; FUSILEER OPERATION; GREENHOUSE PROJECT; GROMMET OPERATION; HARDTACK PROJECT; IVY PROJECT; JANGLE PROJECT; JAPAN; LANL; MANDREL OPERATION; MARSHALL ISLANDS; NATIONAL DEFENSE; NEVADA TEST SITE; NOUGAT OPERATION; NUCLEAR WEAPONS; PACIFIC OCEAN; PLOWSHARE PROJECT; PLUMBBOB PROJECT; PRAETORIAN PROJECT; RANGER PROJECT; REDWING PROJECT; SANDIA LABORATORIES; SANDSTONE PROJECT; TEAPOT PROJECT; TOGGLE OPERATION; TUMBLER PROJECT; UNDERGROUND EXPLOSIONS; UNITED KINGDOM; UPSHOT PROJECT ; US AEC; US DOE; US ERDA
Broader Terms: ASIA; ATMOSPHERIC EXPLOSIONS; EUROPE; EXPLOSIONS; ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; NORTH AMERICA; NUCLEAR EXPLOSIONS; OCEANIA; SEAS; SURFACE WATERS; UNDERGROUND EXPLOSIONS; US AEC; US DOE; US ERDA; US ORGANIZATIONS; WEAPONS; WESTERN EUROPE
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
350100 -- Arms Control -- Policy, Negotiations, & Legislation -- (1987-)

10/5/354 (Item 54 from file: 103)
02984480 EDB-91-018103; NTS-91-007448; INS-91-002387; ERA-16-008452
Title: Fission track analysis of plutonium in small specimens of biological material: Ultrasensitive analysis for sup 239 Pu in 50 urine samples from the Marshall Islands furnished by Brookhaven National Laboratory
Author(s)/Editor(s): Wrenn, M.E.; Singh, N.P.; Xue, Ying-Hua.
Corporate Source: Utah Univ., Salt Lake City, UT (USA). Environmental Radiation and Toxicology Lab. (Code: 9528835)
Sponsoring Organization: DOE/DP
Publication Date: 20 Nov 1990 (26 p)
Report Number(s): DOE/NV/10574-4 UU/ERTL--4
Order Number: DE91005724
Contract Number (DOE): AC08-86NV10574
Document Type: Report; Progress Report
Language: In English
Journal Announcement: EDB9103
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-707
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: A neutron induced fission track method was successfully developed for assaying {sup 239}Pu in human urine. The technique involves means to remove potentially interfering natural uranium from the sample and

unknown number of spikes and controls from the Marshall Islands. 49 samples were successfully analyzed. The mean activity for the 47 samples which were not positive for {sup 239}Pu did not differ significantly from the mean for our control samples, which consisted of urines collected from six young adult Utah residents. 2 figs., 12 tabs.
Major Descriptors: *PLUTONIUM 239 -- CONCENTRATION RATIO; *URINE -- RADIOASSAY
Descriptors: BIOLOGICAL ACCUMULATION; BIOLOGICAL MATERIALS; BNL; FISSION TRACKS; MAN; PROGRESS REPORT; RETENTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; ANIMALS; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS; DOCUMENT TYPES; EVEN-ODD NUCLEI; HEAVY NUCLEI; ISOTOPES; MAMMALS; MATERIALS; NATIONAL ORGANIZATIONS; NUCLEI; PARTICLE TRACKS; PLUTONIUM ISOTOPES; PRIMATES; RADIOISOTOPES; US AEC; US DOE; US ERDA; US ORGANIZATIONS; VERTEBRATES; WASTES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man

10/5/355 (Item 55 from file: 103)
02958357 JPN-90-010194; EDB-90-175601; ERA-16-003411; NTS-91-006638
Title: Annual report of National Institute of Radiological Sciences of the fiscal year 1988
Corporate Source: National Inst. of Radiological Sciences, Chiba (Japan) (Code: 4485000)
Publication Date: Mar 1990 (264 p)
Report Number(s): NIRS-AR-32
Order Number: DE91723449
Document Type: Report; Progress Report
Language: In Japanese
Journal Announcement: EDB9023
Availability: NTIS (US Sales Only), PC A12/MF A01
Distribution: (Report):9 (MF):3 MN-000
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: Japan
Abstract: This annual report presents the activities of the National Institute of Radiological Sciences in Japan in the fiscal year 1988. The activities are divided into research, technical aids, training, medical services, management, library or editing, and international cooperation. Research activities are described under the following sections: (I) newly started special researches for 'biological risk evaluation in public exposure' and 'exposure assessment in the environment and the public involved in food chain', and the continuing special research for 'medical use of accelerated heavy ions'; (II) five assigned researches; (III) ordinary researches concerning physics, pharmachochemistry, biology, genetics, pathology and physiology, cell biology, internal exposure, environmental science, clinical research, clinical research for radiation injuries, medical use of heavy particles, environmental radiation ecology, and aquatic radiation ecology; (IV) risk estimation of radiation; (V) actual surveys for Bikini victims, population doses of medical and occupational exposure, and thorotrast exposure; (VI) project research; (VII) radioactivity survey; (VIII) research supported by Science and Technology Agency aids. Appendices include the personnel list and the bibliography of articles reported by the staff. (N.K.).
Major Descriptors: *JAPANESE ORGANIZATIONS -- RADIOLOGY; *JAPANESE ORGANIZATIONS -- RESEARCH PROGRAMS; *RADIOLOGY -- JAPANESE ORGANIZATIONS; *RADIOLOGY -- RESEARCH PROGRAMS
Descriptors: DOSIMETRY; ENVIRONMENTAL TRANSPORT; IMPLEMENTATION; LABORATORIES; MANAGEMENT; NIRS CYCLOTRON; PLANNING; PROBABILISTIC ESTIMATION; PROGRESS REPORT; RADIATION MONITORING; REVIEWS; RISK

Broader Terms: ACCELERATORS; CYCLIC ACCELERATORS; CYCLOTRONS; DOCUMENT TYPES; ISOCHRONOUS CYCLOTRONS; MASS TRANSFER; MEDICINE; MONITORING; NATIONAL ORGANIZATIONS; NUCLEAR MEDICINE
Subject Categories: 990100* -- Management

10/5/356 (Item 56 from file: 103)
02933716 JPN-90-008270; EDB-90-150960; ERA-15-050206; NTS-91-001792
Title: Annual report of National Institute of Radiological Sciences of the fiscal year 1987
Corporate Source: National Inst. of Radiological Sciences, Chiba (Japan) (Code: 4485000)
Publication Date: Dec 1988 (252 p)
Report Number(s): NIRS-AR-31
Order Number: DE90520440
Document Type: Report; Progress Report
Language: In Japanese
Journal Announcement: EDB9020
Availability: NTIS (US Sales Only), PC A12/MF A01
Distribution: (Report):9 (MF):3 MN-000
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: Japan
Abstract: This annual report presents the activities of the National Institute of Radiological Sciences in Japan in the fiscal year 1987. The activities are divided into research, technical aids, training, medical services, management, library or editing, and international cooperation. Research activities are described under the following sections: (1) 5-year special projects concerning 'stochastic effects of radiation and risk estimation', 'assessment of human exposure to environmental radiation' and 'medical use of accelerated heavy ions'; (2) 6 titles in assigned research; (3) 60 titles in ordinary research covering physics, chemistry, biology, genetics, pathology and physiology, cell biology, internal exposure, environmental science, clinical research, clinical research for radiation injuries, medical use of heavy particles, environmental radiation ecology, and aquatic radiation ecology; (4) risk estimation of radiation; (5) actual surveys for Bikini victims, population doses of medical and occupational exposure, and thorotrast exposure; (6) project research; (7) radioactivity survey; (8) research supported by Science and Technology Agency aids. An outline of technical aids is given in terms of technical services, radiation safety, animal and plant management, and cyclotron management. Appendices give publications, organization, and staff. (N.K.).
Major Descriptors: *JAPANESE ORGANIZATIONS -- RESEARCH PROGRAMS
Descriptors: BIOLOGICAL RADIATION EFFECTS; BUDGETS; DOSIMETRY; ENVIRONMENTAL TRANSPORT; IMPLEMENTATION; INTERNATIONAL COOPERATION; LABORATORIES; MANAGEMENT; NIRS CYCLOTRON; PLANNING; PROBABILISTIC ESTIMATION; PROGRESS REPORT; RADIATION HAZARDS; RADIATION MONITORING; RISK ASSESSMENT
Broader Terms: ACCELERATORS; BIOLOGICAL EFFECTS; COOPERATION; CYCLIC ACCELERATORS; CYCLOTRONS; DOCUMENT TYPES; HAZARDS; HEALTH HAZARDS; ISOCHRONOUS CYCLOTRONS; MASS TRANSFER; MONITORING; NATIONAL ORGANIZATIONS; RADIATION EFFECTS
Subject Categories: 990100* -- Management

10/5/357 (Item 57 from file: 103)
02925423 AIX-21-075090; EDB-90-142665
Title: Overview of the radiological accidents in the world, updated December 1989
Author(s): Nenot, J.C. (CEA Centre d'Etudes Nucleaires de Fontenay-aux-Roses, 92 (France). Dept. de Protection Sanitaire)
Source: International Journal of Radiation Biology (UK) v 57:6. Coden: IJRBA ISSN: 0020-7616

Document Type: Journal Article
Language: In English
Journal Announcement: EDB9019
Subfile: ETD (Energy Technology Data Exchange). GBN (United Kingdom (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: France
Country of Publication: United Kingdom
Abstract: This outline historical review discusses radiological accidents of two categories: those involving large groups of the population with relatively low doses, or a few individuals with high doses resulting in acute health effects. Comments on the following accidents are made: (a) the Marshallese population and the Japanese Fisherman, Pacific Ocean 1954 (b) South East Urals USSR 1957 (c) Juarez, Mexico 1983/84 (d) Chernobyl 1986 (e) Goiania, Brazil 1987. Registration of accidents resulting in high doses to few individuals is also discussed:-criticality accidents, those resulting in high whole-body doses from sealed sources, nuclear power reactor incidents leading to acute doses among workers, those resulting in localized radiation injury and those resulting in severe internal exposure. (UK).
Major Descriptors: *RADIATION ACCIDENTS -- REVIEWS; *REACTOR ACCIDENTS -- REVIEWS
Descriptors: BRAZIL; CHERNOBYLSK-4 REACTOR; MARSHALL ISLANDS; PACIFIC OCEAN ; RADIOLOGICAL PERSONNEL; REACTOR OPERATORS; SEALED SOURCES; THREE MILE ISLAND-2 REACTOR; USA; USSR; WINDSCALE PRODUCTION REACTORS
Broader Terms: ACCIDENTS; AIR COOLED REACTORS; ASIA; DEVELOPING COUNTRIES; DOCUMENT TYPES; EASTERN EUROPE; ENRICHED URANIUM REACTORS; EUROPE; GAS COOLED REACTORS; GRAPHITE MODERATED REACTORS; ISLANDS; LATIN AMERICA; LWGR TYPE REACTORS; MEDICAL PERSONNEL; MICRONESIA; NATURAL URANIUM REACTORS; NORTH AMERICA; OCEANIA; PERSONNEL; PLUTONIUM PRODUCTION REACTORS; POWER REACTORS; PRODUCTION REACTORS; PWR TYPE REACTORS; RADIATION SOURCES; REACTORS; SEAS; SOUTH AMERICA; SURFACE WATERS; THERMAL REACTORS; WATER COOLED REACTORS; WATER MODERATED REACTORS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
220900 -- Nuclear Reactor Technology -- Reactor Safety
070500 -- Isotope & Radiation Source Technology -- Health & Safety -- (1990-)

10/5/358 (Item 58 from file: 103)
02922122 AIX-21-075089; EDB-90-139364
Title: Radiation hazards and victims: a bitter legacy
Author(s): Ruff, T. (Monash Univ., Clayton (Australia))
Source: Australian Nurses' Journal (Australia) v 18:10. Coden: AUNJA
ISSN: 0045-0758
Publication Date: May 1989 p 20-23
Document Type: Journal Article
Language: In English
Journal Announcement: EDB9019
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
US DOE Project/NonDOE Project: NP
Country of Origin: Australia
Country of Publication: Australia
Abstract: The problems of contamination as a result of exposure to ionizing radiation, whether human or natural in origin are reviewed. It is revealed that cancer is still on the increase in the exposed population from the Hirosima and Nagasaki bombings, with genetic defects and chromosomal aberrations higher than thought. The effect of radiation fallout from the nuclear weapon tests in the Pacific and USA are also discussed and it is concluded that nuclear arsenals and the very existence of nuclear facilities containing large inventories of long-lived radionuclides constitute a major threat to the health of humankind, even if nuclear war never occurs.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BIOLOGICAL RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- HUMAN POPULATIONS

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HAZARDS; HIROSHIMA; IONIZING RADIATIONS; MARSHALL ISLANDS; NAGASAKI; NUCLEAR WEAPONS; PUBLIC OPINION; RADIATION DOSES; UNITED KINGDOM; USA; USSR
Broader Terms: ASIA; AUSTRALASIA; BIOLOGICAL EFFECTS; DOSES; EASTERN EUROPE ; EUROPE; EXPLOSIONS; HAZARDS; ISLANDS; JAPAN; MICRONESIA; NORTH AMERICA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RADIATIONS; WEAPONS; WESTERN EUROPE
Subject Categories: 290600* -- Energy Planning & Policy -- Nuclear Energy
560151 -- Radiation Effects on Animals -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
220900 -- Nuclear Reactor Technology -- Reactor Safety
054000 -- Nuclear Fuels -- Health & Safety

10/5/359 (Item 59 from file: 103)
02918158 EDB-90-135399
Title: Correlation of sea level falls interpreted from atoll stratigraphy with turbidites in adjacent basins
Author(s): Lincoln, J.M. (Northwestern Univ., Evanston, IL (USA))
Conference Title: Annual convention and exposition of the American Association of Petroleum Geologists
Conference Location: San Francisco, CA (USA) Conference Date: 3-6 Jun 1990
Source: AAPG Bulletin (American Association of Petroleum Geologists) (USA) v 74:5. Coden: AABUD ISSN: 0149-1423
Publication Date: May 1990 p 704-705
Report Number(s): CONF-900605--
Document Type: Journal Article; Conference Literature
Language: In English
Journal Announcement: EDB9018
Subfile: ETD (Energy Technology Data Exchange). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Past sea levels can be derived from any atoll subsurface sediments deposited at or near sea level by determining the ages of deposition and correcting the present depths to the sediments for subsidence of the underlying edifice since the times of deposition. A sea level curve constructed by this method consists of discontinuous segments, each corresponding to a period of rising relative sea level and deposition of a discrete sedimentary package. Discontinuities in the sea level curve derived by this method correspond to relative sea level falls and stratigraphic hiatuses in the atoll subsurface. During intervals of relative sea level fall an atoll emerges to become a high limestone island. Sea level may fluctuate several times during a period of atoll emergence to become a high limestone island. Sea level may fluctuate several times during a period of atoll emergence without depositing sediments on top of the atoll. Furthermore, subaerial erosion may remove a substantial part of the depositional record of previous sea level fluctuations. For these reasons the authors must look to the adjacent basins to complement the incomplete record of sea level change recorded beneath atolls. During lowstands of sea level, faunas originally deposited near sea level on an atoll may be eroded and redeposited as turbidites in deep adjacent basins. Three such turbidites penetrated during deep-sea drilling at Sites 462 and 315 in the central Pacific correlate well with a late Tertiary sea level curve based on biostratigraphic ages and {sup 87}Sr/{sup 86}Sr chronostratigraphy for core from Enewetak Atoll in the northern Marshall Islands. Further drilling of the archipelagic aprons adjacent to atolls will improve the sea level history that may be inferred from atoll stratigraphy.
Major Descriptors: *CARBONATE ROCKS -- DEPOSITION
Descriptors: SEA LEVEL; STRATIGRAPHY; STRONTIUM 86; STRONTIUM 87; TERTIARY PERIOD
Broader Terms: ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; CENOZOIC ERA; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI;

NUCLEI; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LEVELS; NUCLEI; RADIOISOTOPES; ROCKS; SEDIMENTARY ROCKS; STABLE ISOTOPES; STRONTIUM ISOTOPES
Subject Categories: 580000* -- Geosciences

10/5/360 (Item 60 from file: 103)
02917953 AIX-21-070973; EDB-90-135194; ERA-15-045581
Title: Clusters of health effects associated with radiation around the world (excluding the UK)
Author(s)/Editor(s): Rose, K.S.B.
Corporate Source: UKAEA Harwell Lab. (UK). Environmental and Medical Science Div. (Code: 9050669)
Publication Date: Apr 1990 (vp.)
Report Number(s): AERE-R-13776
ISBN: 0-7058-1587-0
Document Type: Report; Numerical Data; Special Availability
Language: In English
Journal Announcement: EDB9018
Availability: Available from H.M. Stationery Office, London,
Distribution: (Report):9 (MF):9 ND-000
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GBN (United Kingdom (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: United Kingdom
Country of Publication: United Kingdom
Abstract: Several hundred investigations into health effects associated with various sources of radioactivity outside the UK are critically reviewed in 369 summaries in this compilation. Overall 109 statistically significant excesses or deficits (clusters) are identified, 84 positive and 25 negative. Fourteen of these clusters are associated with nuclear power stations. Only two clusters provide good evidence of a causal association, they are the thyroid abnormality and growth retardation clusters among children on Rongelap Island. A third cluster of childhood leukaemia in high fallout areas of southwest Utah may also be causal and a survey of similar high fallout areas in northern Utah seems merited. Most of the other 106 clusters come from surveys that have either severe limitations in their methodology or contain internal contradictory evidence. This comment applies particularly to all 14 clusters identified around nuclear power stations. The same conclusion is not necessarily true for a few of the clusters associated with relatively high levels of natural background radiation; although it is likely that these too are not caused by radiation, further study to confirm or deny this would be helpful. It is concluded that there is no reliable evidence from countries outside the UK of clusters being caused by nuclear power stations. This includes the area close to the only major nuclear fuel reprocessing plant outside Britain at Cap La Hague..
Major Descriptors: *ENDOCRINE DISEASES -- DISEASE INCIDENCE; *ENDOCRINE DISEASES -- EPIDEMIOLOGY; *LEUKEMIA -- DISEASE INCIDENCE; *LEUKEMIA -- EPIDEMIOLOGY; *NUCLEAR FACILITIES -- RADIATION HAZARDS; *REACTORS -- RADIATION HAZARDS
Descriptors: COMPILED DATA; GROWTH; HEALTH HAZARDS; INHIBITION; PUBLIC HEALTH; RADIOACTIVITY; REVIEWS; SPATIAL DISTRIBUTION; THYROID
Broader Terms: BODY; DATA; DISEASES; DISTRIBUTION; DOCUMENT TYPES; ENDOCRINE GLANDS; GLANDS; HAZARDS; HEALTH HAZARDS; HEMIC DISEASES; IMMUNE SYSTEM DISEASES; INFORMATION; NEOPLASMS; NUMERICAL DATA; ORGANS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
220500 -- Nuclear Reactor Technology -- Environmental Aspects
570000 -- Health & Safety

10/5/361 (Item 61 from file: 103)
02865709 AIX-21-043229; EDB-90-082947
Title: Uncertainties in estimating dose-effects relationships under emergency (Hiroshima, Nagasaki 1945, Bikini 1954)
Author(s): Nishiwaki, Y. (IAEA, Vienna (Australia). Div of Nuclear Safety)

effects of ionizing radiation
Author(s)/Editor(s): Stigbrand, T. (ed.)
Conference Title: 15. Berzelius symposium on somatic and genetic effects of ionizing radiation
Conference Location: Umeaa (Sweden) Conference Date: 10-11 Nov 1988
Publisher: Umeaa (Sweden) Umeaa Univ.
Publication Date: 1989 p 167-176 (187 p)
Report Number(s): CONF-8811322--
ISBN: 91-7626-088-7
Document Type: Analytic of a Book; Conference Literature
Language: In English
Journal Announcement: EDB9011
Subfile: ETD (Energy Technology Data Exchange). SWDN (Sweden (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Sweden
Country of Publication: Sweden
Abstract: There are many types of uncertainties involved in the estimation of risks or dose-effect relationships under emergency conditions, However, they may be divided into two major categories: uncertainty due to randomness and that due to fuzziness. The conventional methods of treating uncertainty are to apply statistical methods of estimation, which are, in turn, based upon the concept of probability. Even in cases where the source of uncertainty is of non-statistical nature, formal application of statistical methods of analysis is often made to deal quantitatively with uncertainty, tacitly accepting the premise that uncertainty - whatever its nature - can be equated with randomness. Most of the work on risk analysis or risk assessment has been done using such methods. In the fuzzy set concept set uncertainties are accepted as uncertain with the introduction of the membership function. Instead of the non-fuzzy two-valued logic 'true or false' any intermediate value between zero (false) and one (true) can be assumed for the membership function in the fuzzy set theory. Use of the fuzzy set theory is proposed in an attempt to analyse the causal relation between dose and effects under emergency conditions. After the atomic bombings in Hiroshima and Nagasaki and the Bikini Accident many efforts have been made to estimate the dose of survivors. However, because of various uncertainties involved in this type of estimation under the emergency conditions, the accurate estimation of the individual dose is very difficult. It was recently reported that ESR dosimetry could be applied to estimate the radiation doses of the individual using the enamel of the teeth of the survivors or material such as shell-button, sugar etc. found on the person. (author).
Major Descriptors: *DOSE-RESPONSE RELATIONSHIPS -- PROBABILISTIC ESTIMATION
Descriptors: BIKINI; HIROSHIMA; NAGASAKI; RISK ASSESSMENT
Broader Terms: ASIA; ISLANDS; JAPAN; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 655003* -- Medical Physics -- Dosimetry

10/5/362 (Item 62 from file: 103)
02853844 NOV-90-005482; EDB-90-071083; INS-90-013407
Title: Clean-up of a radioactive spill Soil chemistry and the lessons of Bikini Atoll
Author(s): Fish, W. (Oregon Graduate Center, Beaverton, OR (US))
Title: Proceedings of the 1987 Pacific Northwest metals and minerals conference (abstracts)
Conference Title: Pacific Northwest metals and minerals conference
Conference Location: Portland, OR (USA) Conference Date: 26-28 Apr 1987
Publisher: Albany, OR (USA) Albany Research Center
Publication Date: 1987 p 33 (60 p)
Report Number(s): CONF-8704166--
Document Type: Analytic of a Book; Conference Literature
Language: In English
Journal Announcement: EDB9010
Availability: Albany Research Center, 1450 Queen Ave. SW (Bureau of Mines), Albany, OR 97321-2198 (USA)

NOV (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: Bikini Atoll in the Marshall Islands of the South Pacific was extensively contaminated with radionuclides deposited by thermonuclear weapons testing in the 1940s and 1950s. In recent years, the U.S. government has attempted to restore the habitability of the islands by cleaning up the remaining radioactive material. Although the island no longer presents an acute radiation risk to inhabitants, plants growing on the island concentrate cesium-137 from the soil, presenting an unacceptable risk to the future population. The behavior of Cs-137 has proved to be an intractable problem that has major implications for the risks associated with transporting and processing high-level nuclear wastes in the U.S. Various proposed soil treatment strategies for Bikini are discussed, including ion-exchange treatments and competing-ion strategies. No fully satisfactory treatment currently exists and the problems and prospects of cleaning up after a major nuclear waste spill are presented.
Major Descriptors: *BIKINI -- RADIATION HAZARDS; *CESIUM 137 -- REMOVAL; *SOILS -- DECONTAMINATION
Descriptors: RADIOECOLOGICAL CONCENTRATION; RADIONUCLIDE MIGRATION
Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CLEANING; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL TRANSPORT; HAZARDS; HEALTH HAZARDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 540230* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/363 (Item 63 from file: 103)
02853795 AIX-21-039596; EDB-90-071034
Title: Agronomic behavior of phosphoric rock from Bahia Inglesa using isotopic techniques. 2. Greenhouse experiment in three volcanic ash soils
Original Title: Evaluacion agronomica de roca de Bahia Inglesa con utilizacion de tecnicas isotopicas. 2. Efecto de la aplicacion de roca fosforica en tres suelos derivados de cenizas volcanicas en condiciones de invernadero
Author(s): Pino N, I.; Casas G, L. (Comision Chilena de Energia Nuclear, Santiago (Chile))
Source: Nucleotecnica (Chile) v 9:16. Coden: NUCLE ISSN: 0716-0054
Publication Date: Apr 1989 p 37-40
Document Type: Journal Article
Language: In Spanish
Journal Announcement: EDB9010
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
US DOE Project/NonDOE Project: NP
Country of Origin: Chile
Country of Publication: Chile
Abstract: With the aim to evaluate the behaviour of phosphoric rock in regard to the sorption capacity from three volcanic ash soils, a greenhouse trial was carried out. The isotopic dilution method with triple superphosphate labeled P32 (TSP-32) was used. Total dry matter, P total was determined by colorimetry and the liquid scintillation method for P32 was used. The evaluation of the rock was measured through different isotopical parameters such as A value and P derived from the rock. The behaviour of this material was affected by the different properties of the soils mainly on account of the diverse sorption capacity of them giving an inverse relation among sorption and effectiveness of the rock. The results showed a higher efficiency of TSP for the three soils compared with the phosphoric rock either

Major Descriptors: *PHOSPHORUS 32 -- LABELLED COMPOUNDS; *PHOSPHORUS 32 -- RADIONUCLIDE MIGRATION; *PHOSPHORUS 32 -- SOILS; *SOILS -- GREENHOUSE PROJECT; *SOILS -- ISOTOPE DILUTION; *SOILS -- SUPERPHOSPHATES
Descriptors: ABSORPTION SPECTROSCOPY; ADSORPTION; CHILE; IGNEOUS ROCKS; LIQUID SCINTILLATION DETECTORS
Broader Terms: ACID PHOSPHATES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; DAYS LIVING RADIOISOTOPES; DEVELOPING COUNTRIES; ENVIRONMENTAL TRANSPORT; EXPLOSIONS; FERTILIZERS; ISOTOPE APPLICATIONS; ISOTOPES; LATIN AMERICA; LIGHT NUCLEI; MASS TRANSFER; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; NUCLEI; ODD-ODD NUCLEI; OXYGEN COMPOUNDS; PHOSPHATES; PHOSPHORUS COMPOUNDS; PHOSPHORUS ISOTOPES; RADIATION DETECTORS; RADIOISOTOPES; ROCKS; SCINTILLATION COUNTERS; SORPTION; SOUTH AMERICA; SPECTROSCOPY; TRACER TECHNIQUES
Subject Categories: 540211* -- Environment, Terrestrial -- Basic Studies -- Radiometric Techniques -- (1990-)
440800 -- Miscellaneous Instrumentation -- (1990-)

10/5/364 (Item 64 from file: 103)
02824929 GRA-90-50162; EDB-90-042155; ERA-15-020247
Title: Kiernan reentry measurements system on Kwajalein atoll
Author(s)/Editor(s): Roth, K.R.; Austin, M.E.; Frediani, D.J.; Knittel, G.H.; Mrstik, A.V.
Corporate Source: Massachusetts Inst. of Tech., Lexington, MA (USA). Lincoln Lab. (Code: 9515119)
Publication Date: 1989 (30 p)
Report Number(s): AD-A-214150/5/XAB JA--6340
Note: Pub. in Lincoln Laboratory Jnl., Vol. 2, No. 2, 247-276 1989. Original contains color plates: All DTIC/NTIS reproductions will be in black and white
Document Type: Report
Language: In English
Journal Announcement: EDB9006
Availability: NTIS, PC A03/MF A01
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The Kiernan Reentry Measurements System (KREMS), located on Kwajalein Atoll in the Pacific, is the United States' most sophisticated and important research and development radar site. Consisting of four one-of-a-kind instrumentation radars, KREMS has played a major role for the past 25 years in the collection of data associated with ICBM testing. Furthermore, it has served as an important space-surveillance facility that provides an early U.S. view of many Soviet and Chinese satellite launches. Finally, the system is slated to play a key role in Strategic Defense Initiative experiments.
Major Descriptors: *BALLISTIC MISSILE DEFENSE -- TEST FACILITIES; *MISSILES -- TEST FACILITIES; *RADAR
Descriptors: DATA ACQUISITION; MARSHALL ISLANDS; REENTRY VEHICLES; SATELLITES; SURVEILLANCE
Broader Terms: ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; NATIONAL DEFENSE ; OCEANIA; RANGE FINDERS; SPACE VEHICLES; VEHICLES
Subject Categories: 450500* -- Military Technology, Weaponry, & National Defense -- Strategic Defense Initiative -- (1990-)

10/5/365 (Item 65 from file: 103)
02824928 GRA-90-50151; EDB-90-042154; ERA-15-020246
Title: Proposed actions at US Army Kwajalein atoll. Final environmental impact statement (FEIS)
Corporate Source: Army Strategic Defense Command, Huntsville, AL (USA) (Code: 9523198)
Publication Date: Oct 1989 (196 p)
Report Number(s): AD-A-214139/8/XAB

Language: In English
Journal Announcement: EDB9006
Availability: NTIS, PC A09/MF A02
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of the Proposed Action is to conduct tests and collect data in support of continuing research, development, and operational missions; operational space track missions; and Strategic Defense Initiative research, development, test, and evaluation activities. Three alternatives are considered in the Environmental Impact Statement (EIS). The No-Action Alternative includes the ongoing activities at USAKA. The Proposed Action includes installation and testing of SDI sensing/tracking equipment and interceptor missile systems. Four construction projects in support of base operators are also included. Finally, the EIS examines a Change of Duration Alternative that implement as the Proposed Action over a longer period of time. The EIS examines the environmental impacts of each alternative. Where impacts were found to be potentially significant, mitigation measures are identified. Key topics addressed by the EIS include land and reef areas, water resources, air quality, noise, biological resources including endangered species, cultural resources, socioeconomics, transportation, utilities, electromagnetic radiation from radars, and range safety.
Major Descriptors: *BALLISTIC MISSILE DEFENSE -- SPACE WEAPONS; *MISSILES -- TEST FACILITIES; *SPACE WEAPONS -- TEST FACILITIES; *TEST FACILITIES -- ENVIRONMENTAL IMPACT STATEMENTS
Descriptors: AIR QUALITY; CONSTRUCTION; DATA ACQUISITION; ECONOMIC IMPACT; ELECTROMAGNETIC RADIATION; ENDANGERED SPECIES; MARSHALL ISLANDS; NOISE; SURVEILLANCE; WATER RESOURCES
Broader Terms: DOCUMENT TYPES; ENVIRONMENTAL QUALITY; ISLANDS; MICRONESIA; NATIONAL DEFENSE; OCEANIA; RADIATIONS; RESOURCES
Subject Categories: 450500* -- Military Technology, Weaponry, & National Defense -- Strategic Defense Initiative -- (1990-)

10/5/366 (Item 66 from file: 103)
02824927 GRA-90-50072; EDB-90-042153; ERA-15-020245
Title: Strategic Defense Initiative Demonstration/Validation Program: Environmental assessments summary. Final report
Author(s)/Editor(s): Brown, G.
Corporate Source: Strategic Defense Initiative Organization, Washington, DC (USA) (Code: 9523243)
Publication Date: Aug 1987 (131 p)
Report Number(s): AD-A-214055/6/XAB
Document Type: Report; Progress Report
Language: In English
Journal Announcement: EDB9006
Availability: NTIS, PC A07/MF A01
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: The Strategic Defense Initiative Organization and its proponents plan to conduct Demonstration/Validation tests of the six technologies to demonstrate their respective ability to perform their required tasks, and to validate the requirements to determine their feasibility for a future decision on whether to proceed with full-scale development. Demonstration/Validation tests would be conducted at 14 government facilities across the United States and the Republic of the Marshall Islands, and at contractor facilities. Tests would include

document summarizes the findings expressed in the six environmental assessments for Demonstration/Validation testing of the individual technologies, and analyzes the potential cumulative environmental consequences of testing of multiple technologies at a given facility.
Major Descriptors: *BALLISTIC MISSILE DEFENSE -- DEMONSTRATION PROGRAMS
Descriptors: CONTRACTORS; ENVIRONMENTAL IMPACTS; FLIGHT TESTING; PLANNING; PROGRESS REPORT; TEST FACILITIES; TESTING; VALIDATION
Broader Terms: DOCUMENT TYPES; NATIONAL DEFENSE; TESTING
Subject Categories: 450500* -- Military Technology, Weaponry, & National Defense -- Strategic Defense Initiative -- (1990-)

10/5/367 (Item 67 from file: 103)
02823095 EDB-90-040321; ERA-15-019650
Title: Mission to planet Earth
Author(s): McLucas, J.L.
Title: Proceedings of the conference on technology-based confidence building: Energy and environment
Author(s)/Editor(s): Allred, J.C.; Eckhardt, R.C.; Nichols, A.S. (eds.)
Corporate Source: Los Alamos National Lab., NM (USA) (Code: 9512470)
Conference Title: Conference on technology-based confidence building: energy and environment
Conference Location: Santa Fe, NM (USA) Conference Date: 9-14 Jul 1989
Publication Date: Nov 1989 p 266-274 (513 p)
Report Number(s): LA-11728-C CONF-8907103--
Order Number: DE90004455
Document Type: Analytic of a Report; Conference Literature
Language: In English
Journal Announcement: EDB9006
Availability: NTIS, PC A23/MF A01
Subfile: EPA (Energy Abstracts for Policy Analysis); ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). JMT (DOE contractor)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: National leaders are taking notice of the importance of the topic, and it is the subject of discussion at meetings of heads of state. Whereas only a few years ago, most people were not concerned about the environment, recent public opinions show that 3/4 of the people in the US regard it as a primary concern that demands more attention than it is getting. Many have gone even farther in their thinking, to the point that they think we are in a serious environmental crisis. It is possible that the air of crisis is doing us a favor. It presents the people of all the Earth with the threat of a common danger. It is usually easier to elicit people's cooperation in facing a common danger than it is to get them to cooperate on some worthy but altruistic purpose. Because of the threat, there is a surprising degree of consensus that the problem is real, that we must change not only our ways of behaving but our ways of thinking about our world. There is also a feeling that we used both new policies and new leadership from the top to deal adequately with what faces us. All of this leads me to consider how we can use our space assets to improve our knowledge and equip us to deal with the environmental challenge. Mission to Planet Earth refers to a continuing study of the Earth from space. One of the principal points of this paper is that space is the place to gather most of the data we need to understand the Earth for the first time in all its beauty, glory, and increasingly recognized vulnerability.
Major Descriptors: *RESOURCE MANAGEMENT -- ENVIRONMENTAL EFFECTS; *USA -- RESOURCE MANAGEMENT
Descriptors: DATA ACQUISITION; DATA COMPILATION; DEFORESTATION; DEVELOPING COUNTRIES; ECOLOGY; GREENHOUSE PROJECT; HUMAN POPULATIONS; NASA; NATIONAL SCIENCE FOUNDATION; RESOURCE DEPLETION; SATELLITES; SOIL CONSERVATION; US DOE; US EPA; US NOAA
Broader Terms: DATA; EXPLOSIONS; INFORMATION; MANAGEMENT; NATIONAL

CONSERVATION; US ORGANIZATIONS
Subject Categories: 290000* -- Energy Planning & Policy
290200 -- Energy Planning & Policy -- Economics & Sociology
290300 -- Energy Planning & Policy -- Environment, Health, & Safety

10/5/368 (Item 68 from file: 103)
02756964 EDB-89-148002
Title: Medical status of Marshallese accidentally exposed to 1954 Bravo fallout radiation, January 1985--December 1987
Author(s)/Editor(s): Adams, W.H.; Heotis, P.M.; Scott, W.A.
Corporate Source: Brookhaven National Lab., Upton, NY (USA) (Code: 0936000)
Sponsoring Organization: DOE/ER
Publication Date: 1987 (43 p)
Report Number(s): BNL-52192
Order Number: DE90000002
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Numerical Data
Language: In English
Journal Announcement: EDB8921
Availability: NTIS, PC A03/MF A01 - OSTI; GPO Dep.
Distribution: (Report):2 (MF):4 STD-408
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: This report updates, through 1987, the medical findings on a population of Marshallese accidentally exposed to radioactive fallout in 1954. The Marshall Islands Medical Program of the Medical Department, Brookhaven National Laboratory, issues these summaries for distribution to institutions and individuals world-wide who are concerned about the adverse medical consequences of radiation exposure in general or, in particular, the plight of the radiation-exposed Marshallese. The exposed Marshallese population originally comprised 64 persons on Rongelap Atoll who received an estimated 190 rads of whole-body external gamma radiation, 18 on Ailingnae Atoll who received 110 rads, and 159 on Utirik Atoll who received 11 rads. In addition, there were 3 fetuses on Rongelap, 1 on Ailingnae, and 8 on Utirik, each of which reveived equivalent whole-body doses. Because of radioiodines in the fallout, the thyroid gland received an additional exposure that was much greater than the whole-body dose, although its magnitude was, in part, a function of age at the time of exposure (Lessard et al., 1985).
Major Descriptors: *FALLOUT -- BIOLOGICAL RADIATION EFFECTS; *HUMAN POPULATIONS -- HEALTH HAZARDS; *MORTALITY -- EVALUATION
Descriptors: BRAVO EVENT; COMPILED DATA; DIAGNOSIS; MARSHALL ISLANDS; NEOPLASMS
Broader Terms: BIOLOGICAL EFFECTS; CASTLE PROJECT; DATA; DISEASES; EXPLOSIONS; HAZARDS; INFORMATION; ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; NUMERICAL DATA; OCEANIA; POPULATIONS; RADIATION EFFECTS; SURFACE EXPLOSIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man

10/5/369 (Item 69 from file: 103)
02756961 EDB-89-147999
Title: Resuspension studies at Bikini Atoll
Author(s)/Editor(s): Shinn, J.H.; Homan, D.N.; Robison, W.L.
Corporate Source: Lawrence Livermore National Lab., CA (USA) (Code: 9513035)
Sponsoring Organization: DOE/DP
Publication Date: Aug 1989 (27 p)
Report Number(s): UCID-18538-Rev.1
Order Number: DE89017751
Contract Number (DOE): W-7405-ENG-48

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Language: In English
Journal Announcement: EDB8921
Availability: NTIS, PC A03/MF A01 - OSTI; GPO Dep.
Distribution: (Report):1 (MF):4 MN-702
Subfile: ERA (Energy Research Abstracts); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The following experiments were conducted on Bikini Atoll to provide key parameters for an assessment of inhalation exposure from plutonium-contaminated dust aerosols: (1) a characterization of background (plutonium activity, dust, plutonium, sea spray, and organic aerosol concentrations), (2) a study of plutonium resuspension from a bare field, (3) a study of plutonium resuspension by traffic, and (4) a study of personal inhalation exposure. Studies similar to (1) and (2) have been previously performed at Enewetak Atoll. 9 refs., 5 figs., 8 tabs.
Major Descriptors: *PARTICLE RESUSPENSION -- RISK ASSESSMENT; *PLUTONIUM -- INHALATION
Descriptors: AEROSOLS; AUTOMOBILES; BIKINI; DOSE EQUIVALENTS; DUSTS; OCCUPATIONAL EXPOSURE; PARTICLE SIZE; PLANTS; RADIATION PROTECTION; SOILS
Broader Terms: ACTINIDES; COLLOIDS; DISPERSIONS; ELEMENTS; INTAKE; ISLANDS; MARSHALL ISLANDS; METALS; MICRONESIA; OCEANIA; SIZE; SOLS; TRANSURANIUM ELEMENTS; VEHICLES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man

10/5/370 (Item 70 from file: 103)
02396704 GRA-89-20066; EDB-89-161962; ERA-15-001363
Title: Draft environmental impact statement. Proposed actions at US Army Kwajalein Atoll
Corporate Source: Army Strategic Defense Command, Huntsville, AL (USA) (Code: 9523198)
Publication Date: Jun 1989 (394 p)
Report Number(s): AD-A-209676/6/XAB
Note: Original contains color plates: All DTIC/NTIS reproductions will be in black and white
Document Type: Report
Language: In English
Journal Announcement: EDB8998
Availability: NTIS, PC A17/MF A01
Distribution: (Report):9 (MF):6 ND-00
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). GRA (NTIS NTS)
US DOE Project/NonDOE Project: NP
Country of Origin: United States
Country of Publication: United States
Abstract: This report is the Draft Environmental Impact Statement(DEIS) for the proposed actions at the U.S. Army Kwajalein Atoll (USAKA). The proposed action would include continuation of current activities at USAKA and planned non-Strategic Defense Initiative (SDI) activities as well as proposed SDI activities. The U.S. Army Strategic Defense Command will conduct two public hearings as part of the environmental impact analysis process. The close of the public comment period on the DEIS is August 7, 1989. The comments received during the public hearings, as well as written comments received during the public-comment period, will be used to develop the final environmental impact statement which is scheduled to be published in October 1989.
Major Descriptors: *BALLISTIC MISSILE DEFENSE -- MISSILE LAUNCHING SITES; *MARSHALL ISLANDS -- MILITARY FACILITIES; *MILITARY FACILITIES -- ENVIRONMENTAL IMPACT STATEMENTS; *MISSILE LAUNCHING SITES -- ENVIRONMENTAL IMPACT STATEMENTS
Broader Terms: DOCUMENT TYPES; ISLANDS; MICRONESIA; NATIONAL DEFENSE; OCEANIA

Technologies -- Assessment of Energy Technologies -- (-1989)
990500 -- Civilian Defense -- (-1987)

10/5/371 (Item 71 from file: 103)
02396450 EDB-88-163452
Title: Marshall Islands radiological followup
Author(s): Greenhouse, N.A.; McGraw, T.F. (Brookhaven National Lab., Upton, NY (USA))
Title: Operational health physics: Proceedings
Author(s)/Editor(s): Carson, P.L.; Hendee, W.R.; Hunt, D.C.
Corporate Source: Health Physics Society, Laramie, WY (USA). Proceedings Committee of the Central Rocky Mountain Chapter (Code: 9523770)
Conference Title: 9. topical symposium on operational health physics
Conference Location: Denver, CO (United States) Conference Date: FEBRUARY 9, 1976
Publication Date: 1976 (742-747 p)
Report Number(s): CONF-760202--
Order Number: DE88900453
Document Type: Analytic of a Report; Conference Literature; Numerical Data
Language: In English
Journal Announcement: EDB8898
Availability: OSTI; NTIS
Subfile: ETD (Energy Technology Data Exchange); ERA (Energy Research Abstracts); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: In August, 1968, President Johnson announced that the people of Bikini Atoll would be able to return to their homeland. Thereafter, similar approval was given for the return of the peoples of Enewetak. These two regions, which comprised the Pacific Nuclear Testing Areas from 1946 to 1958, will probably be repopulated by the original inhabitants and their families within the next year. As part of its continuing responsibility to insure the pulbic health and safety in connection with the nuclear program under its sponsorship, ERDA (formerly AEC) has contracted Brookhaven National Laboratory to establish radiological safety and environmental monitoring programs for the returning Bikini and Enewetak peoples. These programs are designed to define the external radiation environment, assess radiation doses from internal emitters in the human food chain, make long range predictions of total doses and dose commitments to individuals an to each population group, and to suggest actions which will minimize doses via the more significant pathways.
Major Descriptors: *BNL -- RESEARCH PROGRAMS; *FOOD CHAINS -- CONTAMINATION ; *MARSHALL ISLANDS -- RADIATION MONITORING; *RADIATION MONITORING -- RESEARCH PROGRAMS
Descriptors: EXPERIMENTAL DATA; FORECASTING; RADIATION DOSES; US ERDA
Broader Terms: DATA; DOSES; INFORMATION; ISLANDS; MICRONESIA; MONITORING; NATIONAL ORGANIZATIONS; NUMERICAL DATA; OCEANIA; US AEC; US DOE; US ERDA; US ORGANIZATIONS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
B3200 -- Water

10/5/372 (Item 72 from file: 103)
02396447 EDB-88-163405
Title: Comparison of gamma-ray exposure rate measurements at Bikini atoll
Author(s): Gudiksen, P.H.; Crites, T.R. (Univ. of California, Livermore (USA))
Title: Operational health physics: Proceedings
Author(s)/Editor(s): Carson, P.L.; Hendee, W.R.; Hunt, D.C.

Committee of the Central Rocky Mountain Chapter (Code: 9523770)
Conference Title: 9. topical symposium on operational health physics
Conference Location: Denver, CO (United States) Conference Date: FEBRUARY 9, 1976
Publication Date: 1976 (727-729 p)
Report Number(s): CONF-760202--
Order Number: DE88900453
Document Type: Analytic of a Report; Conference Literature
Language: In English
Journal Announcement: EDB8898
Availability: OSTI; NTIS
Subfile: ETD (Energy Technology Data Exchange); ERA (Energy Research Abstracts); INS (US Atomindex input). JMT (DOE contractor)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: A radiological survey of Bikini and Eneu Islands of the Bikini Atoll was conducted during June 1975 to assess the potential radiation doses that may be received by the returning Bikinians. Bikini Atoll was one of the US nuclear weapons testing sites in the Pacific. An integral part of the survey included measurements of the gamma-ray exposure rates at 1 m above the ground with portable NaI instruments at nearly 2700 locations on the two islands. For comparison purposes, similar measurements were made with a pressurized ion chamber at approximately 200 locations, and with LiF and CaF{sub 2}:Dy thermoluminescent dosimeters (TLDs) at 80 locations. The results indicate that the NaI scintillators overresponded because of their nonlinear energy characteristics. The responses of the LiF dosimeters and the pressurized ion chamber agreed to within 13%. Attenuation studies with LiF TLDs indicated that roughly 25% of the total free air exposure rate at 1 m was due to beta radiation.
Major Descriptors: *BIKINI -- RADIATION MONITORING
Descriptors: ATTENUATION; COMPARATIVE EVALUATIONS; GAMMA RADIATION; IONIZATION CHAMBERS; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION DOSES; SURVEYS; THERMOLUMINESCENT DOSEMETERS
Broader Terms: DOSEMETERS; DOSES; ELECTROMAGNETIC RADIATION; EVALUATION; EXPLOSIONS; IONIZING RADIATIONS; ISLANDS; LUMINESCENT DOSEMETERS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; MONITORING; OCEANIA; RADIATION DETECTORS; RADIATIONS; WEAPONS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: B3310* -- Radioactive materials monitoring & transport; meteorology
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/373 (Item 73 from file: 103)
02381308 EDB-89-127282
Author(s): Robison, W.L.; Phillips, W.A.
Title: Estimates of the radiological dose from ingestion of /sup 137/Cs and /sup 90/Sr to infants, children, and adults in the Marshall Islands
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 17 Feb 1989 p 29
Report Number(s): UCRL-53917
Order Number: DE89014001
Contract Number (DOE): W-7405-ENG-48
Note: Portions of this document are illegible in microfiche products
Document Type: Report
Language: English
Journal Announcement: EDB8900
Availability: NTIS, PC A03/MF A01 - OSTI; 1.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States

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equivalent due to the intake of /sup 137/Cs and /sup 90/Sr at a contaminated atoll in the Marshall Islands would be greater when intake begins as an adult than when intake begins as an infant or child. We found that generally /sup 137/Cs contributes 97 to 98% of the dose and /sup 90/Sr contributes only 2 to 3 %. We also found that the integral 30-, 50-, and 70-y effective dose equivalent estimated for intake beginning as adults is greater than that for intake beginning at any other age. There are two factors that cause the adult estimated dose to be greater than the dose to infants and children. The major factor is the consistently higher intake of local foods, and consequently higher intake of /sup 137/Cs, for adults. The second is a combination of changing body weights, fractional deposits, and biological half-life for /sup 137/Cs with age, and the reduced concentration of /sup 137/Cs in food with time. Consequently, the estimated effective integral dose equivalents for adults due to ingestion of /sup 137/Cs and /sup 90/Sr can be used as a conservative estimate or intake beginning in infancy and childhood. 95 refs., 4 figs., 10 tabs.
Major Descriptors: *ADULTS -- DOSE EQUIVALENTS; *CHILDREN -- DOSE EQUIVALENTS; *INFANTS -- DOSE EQUIVALENTS; *MARSHALL ISLANDS -- HUMAN POPULATIONS
Descriptors: BIOLOGICAL EFFECTS; CESIUM 137; FOOD CHAINS; INGESTION; STRONTIUM 90
Broader Terms: AGE GROUPS; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHILDREN; EVEN-EVEN NUCLEI; INTAKE; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560160* -- Radionuclide Effects, Kinetics, & Toxicology

10/5/374 (Item 74 from file: 103)
02375226 EDB-89-121200
Title: Evolution of reef and atoll margin carbonates, upper Eocene through lower Miocene, Enewetak, Marshall Islands
Author(s): Saller, A.H.; Schlanger, S.O.
Affiliation: Unocal Science and Technology, Brea, CA (USA)
Conference Title: Annual meeting of the American Association of Petroleum Geologists
Conference Location: Houston, TX, USA Conference Date: 20-23 Mar 1988
Source: AAPG Bull. (United States) v 72:2. Coden: AABUD
Publication Date: Feb 1988 p 243
Report Number(s): CONF-880301-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8900
Subfile: ETD (Energy Technology Data Exchange). JMT (DOE contractor)
Country of Origin: United States
Abstract: Two wells drilled along the margin of Enewetak Atoll penetrated approximately 1000 m of upper Eocene, Oligocene, and lower Miocene carbonates. Strontium isotope stratigraphy indicates relatively continuous deposition of carbonate from 40 Ma to 20 Ma. Depositional environments show a gradual basinward progradation of facies with slope carbonates passing upward into fore-reef, reef, back-reef, and lagoonal carbonates. Slope strata contain wackestones and packstones with submarine-cemented lithoclasts, coral, coralline algae fragments, benthic rotaline forams, planktonic forams, and echinoderm fragments. Fore-reef strata are dominantly packstones and boundstones containing large pieces of coral, abundant benthic forams, coralline algae fragments, stromatoporoids( ), and minor planktonic forams. Reef and near-reef sediments include coralgal boundstones and grainstones with abundant benthic forams. Halimeda and miliolid forams are common in lagoonward parts of the back reef. Sponge borings, geopetal structures, and fractures are common in reef and fore-reef strata. Lagoonal strata are wackestones and packstones with common mollusks, coral, coralline

extensively altered strata near the atoll margin. Aragonite dissolution and calcite cements (radiaxial and cloudy prismatic) are abundant in fore-reef, reef, and some back-reef strata. Petrographic and geochemical data indicate aragonite dissolution and calcite cementation in seawater at burial depths of 100 to 300 m. Dolomite occurs in slope and deeply buried reefal carbonates. Most dolomitization occurred at burial depths of more than 1000 m in cool marine waters circulating through the atoll. lagoonal strata are not significantly altered by marine diagenesis and still contain abundant primary aragonite and magnesium calcite.
Major Descriptors: *MARSHALL ISLANDS -- REEFS; *REEFS -- DEPOSITION
Descriptors: ALGAE; CALCITE; CARBONATE ROCKS; CORALS; DISSOLUTION; FOSSILS; GEOCHEMISTRY; MIOCENE EPOCH; STRATIGRAPHY
Broader Terms: ALKALINE EARTH METAL COMPOUNDS; CALCIUM CARBONATES; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBONATE MINERALS; CARBONATES; CENOZOIC ERA; CHEMISTRY; CNIDARIA; GEOLOGIC AGES; GEOLOGIC STRUCTURES; GEOLOGY; ISLANDS; MICRONESIA; MINERALS; OCEANIA; OXYGEN COMPOUNDS; PLANTS; ROCKS ; SEDIMENTARY ROCKS; TERTIARY PERIOD
Subject Categories: 020200* -- Petroleum -- Reserves, Geology, & Exploration

10/5/375 (Item 75 from file: 103)
02364806 EDB-89-110778
Title: Summary of the Bikini Atoll ionizing-radiation survey
Author(s): Shingleton, K.L.; Cate, J.L.; Trent, M.G.; Robison, W.L.; Griffith, R.V.; Anderson, K.J. (eds.)
Title: Hazards Control Department annual technology review, 1987
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Jul 1988 p 1-13
Report Number(s): UCRL-50007-87
Order Number: DE89002470
Note: Portions of this document are illegible in microfiche products
Document Type: Analytic of a Report
Language: English
Journal Announcement: ERA8900
Availability: NTIS, PC A07/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: This survey was designed to measure the beta dose rate from /sup 137/Cs and /sup 90/Sr//sup 90/Y relative to previously measured gamma dose rates on Bikini and Eneu Islands. The authors exposed modified Panasonic-802 thermoluminescent dosimeters (TLDs) in over 100 sites for six months to accomplish this task. The sites were selected to be either in areas of known high gamma dose rates, in areas where the Marshallese would likely spend most of their time upon resettlement, or in areas where experimental environmental changes has been made. Therefore, the beta and gamma does rates do not represent island averages. The mean beta dose rate on Enue ranged from 23 mrem/yr at 1 cm to 6 mrem/yr at 100 cm, as compared with a mean deep dose rate of 17.5 mrem/yr. The mean beta dose rate around houses and in general area on Bikini ranged from 425 mrem/yr at 1 cm to 178 mrem/yr at 100 cm, compared with a deep dose rate of about 154 mrem/yr. Because monitoring sites were specifically placed in the most-contaminated areas of Bikini and Eneu, the unshielded beta dose rates reported provide an upper limit of radiation dose;actual doses received by the Bikinians would be reduced significantly by clothing, footwear, and ground cover such as crushed coral, which reduces the beta dose rate by 80-90%. The amount of time spent in houses and in the minimally contaminated areas around houses and the lagoon would further reduce the beta dose rates reported here. 17 referenced, 12 figures, 1 table.
Major Descriptors: *BIKINI -- RADIATION MONITORING; *CESIUM 137 -- BETA DOSIMETRY; *STRONTIUM 90 -- BETA DOSIMETRY
Descriptors: PROGRESS REPORT; SURFACE CONTAMINATION

RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CONTAMINATION; DOCUMENT TYPES; DOSIMETRY; EVEN-EVEN NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
INIS Subject Categories: B3310* -- Radioactive materials monitoring & transport; meteorology

10/5/376 (Item 76 from file: 103)
02356897 DEN-89-007995; EDB-89-102868
Title: Bikini Atoll still hazardous
Author(s): Vogt, H.H.
Source: Therapiewoche (Germany, Federal Republic of) v 39:22. Coden: THEWA
Publication Date: 29 May 1989 p 1565-1566
Document Type: Journal Article
Language: German
Journal Announcement: ETD8900
Subfile: ETD (Energy Technology Data Exchange). DEN (Federal Republic of Germany (sent to DOE from))
Country of Origin: Germany, Federal Republic of
Abstract: None
Major Descriptors: *BIKINI -- CONTAMINATION; *BIKINI -- RADIATION HAZARDS
Descriptors: CESIUM 137; COCONUT PALMS; FALLOUT; FISSION PRODUCTS; FOOD CHAINS; FRUITS; HUMAN POPULATIONS; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION DOSES; RADIONUCLIDE MIGRATION; SOILS; STRONTIUM 90; VEGETABLES
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DOSES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EXPLOSIONS; FOOD; HAZARDS; HEALTH HAZARDS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; LILIOPSIDA; MAGNOLIOPHYTA; MARSHALL ISLANDS; MASS TRANSFER; MATERIALS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; PLANTS; POPULATIONS; RADIOACTIVE MATERIALS; RADIOISOTOPES; STRONTIUM ISOTOPES; TREES; WEAPONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

10/5/377 (Item 77 from file: 103)
02351044 NOV-89-060494; EDB-89-097015
Author(s): Saller, A.H.; Schlanger, S.O.
Title: Evolution of reef and atoll margin carbonates, upper Eocene through lower Miocene, Enewetak, Marshall Islands
Conference Title: Annual meeting of the American Association of Petroleum Geologists
Conference Location: Houston, TX, USA Conference Date: 20 Mar 1988
Publisher: American Association of Petroleum Geologists,Tulsa, OK
Publication Date: 1988 p vp.
Report Number(s): CONF-880301-
Document Type: Book; Conference literature
Language: English
Journal Announcement: ETD8900
Availability: American Association of Petroleum Geologists, P.O. Box 979, Tulsa, OK 74101.
Subfile: ETD (Energy Technology Data Exchange). NOV (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Two wells drilled along the margin of Enewetak Atoll penetrated approximately 1,000 m of upper eocene, Oligocene, and lower Miocene carbonates. STrontium isotope stratigraphy indicates relatively continuous deposition of carbonate from 40 Ma to 20 Ma. Depositional

carbonates passing upward into fore-reef, reef, back-reef, and lagoonal carbonates. Slope strata contain wackestones and packstones with submarine-cemented lithoclasts, coral, coralline algae fragments, benthic rotaline forams, planktonic forams, and echinoderm fragments. Fore-reef strata are dominantly packstones and boundstones containing large pieces of coral, abundant benthic forams, coralline algae fragments, stromatoporoids(.), and minor planktonic forams. Reef and near-reef sediments include coralgal boundstones and grainstones with abundant benthic forams. Halimeda and miliolid forams are common in lagoonward parts of the back reef. Sponge borings, geopetal structures, and fractures are common in reef and fore-reef strata. Lagoonal strata are wackestones and packstones with common mollusks, coral, coralline algae, and benthic forams (rotaline and miliolid). Diagenesis has extensively altered strata near the atoll margin. Aragonite dissolution and calcite cements (radiaxial and cloudy prismatic are abundant in fore-reef, reef, and some back-reef strata). Petrographic and geochemical data indicate arogonite dissolution and calcite cementation in seawater at burial depths of 100 to 300 m. Dolomite occurs in slope and deeply buried reefal carbonates.
Major Descriptors: *CARBONATE ROCKS -- DEPOSITION; *MARSHALL ISLANDS -- PETROLEUM GEOLOGY; *NATURAL GAS DEPOSITS -- GEOLOGIC HISTORY; *PETROLEUM DEPOSITS -- GEOLOGIC HISTORY; *REEFS -- DEPOSITION
Descriptors: CALCITE; CEMENTING; CONTINENTAL MARGIN; DOLOMITE; EOCENE EPOCH ; EXPLORATION; GEOCHEMISTRY; ISOTOPE DATING; MIOCENE EPOCH; PETROGRAPHY ; SANDSTONES; STRATIGRAPHY
Broader Terms: AGE ESTIMATION; ALKALINE EARTH METAL COMPOUNDS; CALCIUM CARBONATES; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBONATE MINERALS; CARBONATES; CENOZOIC ERA; CHEMISTRY; GEOLOGIC AGES; GEOLOGIC DEPOSITS; GEOLOGIC STRUCTURES; GEOLOGY; ISLANDS; MAGNESIUM CARBONATES; MAGNESIUM COMPOUNDS; MICRONESIA; MINERAL RESOURCES; MINERALS; OCEANIA; OXYGEN COMPOUNDS; RESOURCES; ROCKS; SEDIMENTARY ROCKS; TERTIARY PERIOD
Subject Categories: 020200* -- Petroleum -- Reserves, Geology, & Exploration
030200 -- Natural Gas -- Reserves, Geology, & Exploration

10/5/378 (Item 78 from file: 103)
02346308 ECN-89-050536; EDB-89-092277
Author(s): Okken, P.A.
Title: Starting points and backgrounds of calculations of the EOS-scenarios DG and GO with CO/sub 2/ emission maximum. Object subsidy project greenhouse scenarios (7002)
Original Title: Uitgangspunten en achtergronden bij berekeningen van de EOS-scenario's DG en GO met CO/sub 2/-emissieplafonds. Doelsubsidieproject broeikasscenario's (7002)
Corporate Source: Stichting Energieonderzoek Centrum Nederland, Petten (Netherlands). Energie Studie Centrum
Publication Date: Mar 1989 p 27
Report Number(s): ESC-WR-89-02
Document Type: Report; Numerical data
Language: Dutch
Journal Announcement: ERA8900
Availability: Netherlands Energy Research Foundation ECN, P.O. Box 1, 1755 ZG Petten, Netherlands.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange).
Country of Origin: Netherlands
Country of Publication: Netherlands
Abstract: Calculations have been executed by means of the MARKAL-model for the Dutch energy economy with exogenous national CO/sub 2/ emission limits. Starting points are the EOS-scenarios 'Dynamic and Growth' (DG) and 'Partial Development' (Gedeelde Ontwikkeling or GO) for the period 1989-2020. The model has been adjusted for the transport sector and altered with regard to CO/sub 2/. These alterations are discussed here. 4 figs., 37 refs., 3 tabs.
Major Descriptors: *CARBON DIOXIDE -- EMISSION; *ELECTRIC POWER -- USES

CALCULATIONS; ENERGY DEMAND; ENERGY MODELS; ENVIRONMENTAL POLICY; FORECASTING; GREENHOUSE PROJECT; M CODES; MATHEMATICAL MODELS; NATURAL GAS; NETHERLANDS; NUMERICAL DATA; RECYCLING; RENEWABLE ENERGY SOURCES
Broader Terms: CARBON COMPOUNDS; CARBON OXIDES; CHALCOGENIDES; COMPUTER CODES; DATA; DEMAND; ENERGY SOURCES; EUROPE; EXPLOSIONS; FLUIDS; FOSSIL FUELS; FUEL GAS; FUELS; GAS FUELS; GASES; GOVERNMENT POLICIES; INFORMATION; NUCLEAR EXPLOSIONS; OXIDES; OXYGEN COMPOUNDS; POLLUTION ABATEMENT; POWER; WESTERN EUROPE
Subject Categories: 290300* -- Energy Planning & Policy -- Environment, Health, & Safety
290100 -- Energy Planning & Policy -- Energy Analysis & Modeling
500600 -- Environment, Atmospheric -- Regulations -- (-1989)

10/5/379 (Item 79 from file: 103)
02341787 AIX-20-041027; EDB-89-087755
Title: Bikini accident and Chernobyl accident
Author(s): Nishiwaki, Y.; Tschirf, E.; Hefner, A. (ed.)
Affiliation: Kinki Univ., Higashi-Osaka, Osaka (Japan). Atomic Energy Research Inst.
Title: 4. European congress and 13. regional congress of IRPA. 20 years experience in radiation protection - a review and outlook
Corporate Source: Oesterreichischer Verband fuer Strahlenschutz (OeVS), Vienna (Austria)
Conference Title: 4. European congress and 13. regional congress of the International Radiation Protection Association
Conference Location: Salzburg, Austria Conference Date: 15 Sep 1986
Publication Date: Nov 1988 p 786-790
Report Number(s): OEVS-Mitteilung-1988; CONF-860969-
Order Number: DE89613806
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: ERA8900
Availability: NTIS (US Sales Only), PC A99/MF A01 - OSTI; INIS.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
Country of Origin: Austria
Country of Publication: Austria
Abstract: The number of persons evacuated after Chernobyl accident is reported to be about 135000, which is almost comparable to that of the exposed to the atomic bombings at Hiroshima and Nagasaki in 1945. However, in case of atomic bombing, the whole body gamma and neutron radiation is received in an extremely short time, possibly of the order of some nano seconds. In addition, they received strong effects of blast waves, thermal radiation, and other toxic chemicals released to the environment due to destruction of various facilities by bombing. In case of Chernobyl accident, the whole body gamma radiation is received in a much longer time, possibly of the order of some hours, by the evacuees. The dose rate would be greatly different. In this respect, the accidental exposure to the strongly radioactive fallout at Bikini accident in 1954 may be more similar to the case of Chernobyl accident. The author makes some comparison of these cases, because of his involvement in investigation of the past radioactive fallout as observed in Japan. The radioactivity due to Chernobyl accident reached Japan at about 8 days after the accident. The volatile radionuclides such as I 131, Cs 137 were predominant. The radioactivity ratio Cs 137/Cs 134 was about 2. In case of Bikini H-bomb test, all radioactivities are released instantaneously and radioactivities of non-volatile as well as volatile elements were observed. 2 figs.
Major Descriptors: *BIKINI -- NUCLEAR EXPLOSIONS; *CHERNOBYLSK-4 REACTOR -- REACTOR ACCIDENTS; *HUMAN POPULATIONS -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- FALLOUT; *REACTOR ACCIDENTS -- FALLOUT
Descriptors: COMPARATIVE EVALUATIONS
Broader Terms: ACCIDENTS; DOSES; ENRICHED URANIUM REACTORS; EXPLOSIONS; GRAPHITE MODERATED REACTORS; ISLANDS; LWGR TYPE REACTORS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; POWER REACTORS; REACTORS;

Subject Categories: 560151* -- Radiation Effects on Animals -- Man
220900 -- Nuclear Reactor Technology -- Reactor Safety
210300 -- Power Reactors, Nonbreeding, Graphite Moderated
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
C5100 -- Actual Accidents

10/5/380 (Item 80 from file: 103)
02341778 AIX-20-041027; EDB-89-087746
Title: Bikini accident and Chernobyl accident
Author(s): Nishiwaki, Y.; Tschirf, E.; Hefner, A. (ed.)
Affiliation: Kinki Univ., Higashi-Osaka, Osaka (Japan). Atomic Energy Research Inst.
Title: 4. European congress and 13. regional congress of IRPA. 20 years experience in radiation protection - a review and outlook
Corporate Source: Oesterreichischer Verband fuer Strahlenschutz (OeVS), Vienna (Austria)
Conference Title: 4. European congress and 13. regional congress of the International Radiation Protection Association
Conference Location: Salzburg, Austria Conference Date: 15 Sep 1986
Publication Date: Nov 1988 p 786-790
Report Number(s): OEVS-Mitteilung-1988; CONF-860969-
Order Number: DE89613806
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: ERA8900
Availability: NTIS (US Sales Only), PC A99/MF A01 - OSTI; INIS.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
Country of Origin: Austria
Country of Publication: Austria
Abstract: The number of persons evacuated after Chernobyl accident is reported to be about 135000, which is almost comparable to that of the exposed to the atomic bombings at Hiroshima and Nagasaki in 1945. However, in case of atomic bombing, the whole body gamma and neutron radiation is received in an extremely short time, possibly of the order of some nano seconds. In addition, they received strong effects of blast waves, thermal radiation, and other toxic chemicals released to the environment due to destruction of various facilities by bombing. In case of Chernobyl accident, the whole body gamma radiation is received in a much longer time, possibly of the order of some hours, by the evacuees. The dose rate would be greatly different. In this respect, the accidental exposure to the strongly radioactive fallout at Bikini accident in 1954 may be more similar to the case of Chernobyl accident. The author makes some comparison of these cases, because of his involvement in investigation of the past radioactive fallout as observed in Japan. The radioactivity due to Chernobyl accident reached Japan at about 8 days after the accident. The volatile radionuclides such as I 131, Cs 137 were predominant. The radioactivity ratio Cs 137/Cs 134 was about 2. In case of Bikini H-bomb test, all radioactivities are released instantaneously and radioactivities of non-volatile as well as volatile elements were observed. 2 figs.
Major Descriptors: *BIKINI -- NUCLEAR EXPLOSIONS; *CHERNOBYLSK-4 REACTOR -- REACTOR ACCIDENTS; *HUMAN POPULATIONS -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- FALLOUT; *REACTOR ACCIDENTS -- FALLOUT
Descriptors: COMPARATIVE EVALUATIONS
Broader Terms: ACCIDENTS; DOSES; ENRICHED URANIUM REACTORS; EXPLOSIONS; GRAPHITE MODERATED REACTORS; ISLANDS; LWGR TYPE REACTORS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; POWER REACTORS; REACTORS; THERMAL REACTORS; WATER COOLED REACTORS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
220900 -- Nuclear Reactor Technology -- Reactor Safety
210300 -- Power Reactors, Nonbreeding, Graphite Moderated
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
C5100 -- Actual Accidents

10/5/381 (Item 81 from file: 103)
02340766 AIX-20-044541; EDB-89-086734
Title: Bikini Atoll ionizing radiation survey - May 1985 - May 1986
Author(s): Shingleton, K.L.; Cate, J.L.; Trent, M.G.; Robison, W.L.
Affiliation: Lawrence Livermore National Lab., CA (USA)
Title: Radiation protection practice. IRPA 7
Corporate Source: International Radiation Protection Association, Washington, DC (USA) Australian Radiation Protection Society, Sydney (Australia)
Conference Title: 7. international congress of the International Radiation Protection Association
Conference Location: Sydney, Australia Conference Date: 10 Apr 1988
Publisher: Pergamon Press,Sydney, Australia
Publication Date: 1988 p 1370-1373
Report Number(s): CONF-880404-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: ETD8900
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
Country of Origin: Australia
Country of Publication: Australia
Abstract: Between 1946 and 1958, the United States conducted 23 nuclear tests at the Bikini Atoll in the Marshall Islands. The single largest detonation was the Bravo test, which resulted in extensive radioactive contamination of a number of islands and prevented the timely resettlement of the native population. Since 1958, many studies have been conducted to assess clean up options and the internal and external radiation doses the Bikinians would likely receive, should they resettle the islands. Although the external dose rates from ..beta.. and ..gamma.. radiation have been previously determined by aerial and ground measurement techniques, technical constraints limited the assessment of external ..beta.. dose rates from the Cs-137 and Sr-90/Y-90 contamination on the islands. Now, because of the recent development of very thin thermoluminescent dosimeters (TLDs), these external ..beta.. dose rates can be measured.
Major Descriptors: *BIKINI -- BETA DOSIMETRY
Descriptors: CONTAMINATION; DOSE RATES; GROUND COVER; HOUSES; RADIATION DOSES; RADIATION MONITORING; SPATIAL DOSE DISTRIBUTIONS; THERMOLUMINESCENT DOSEMETERS
Broader Terms: BUILDINGS; DOSEMETERS; DOSES; DOSIMETRY; ISLANDS; LUMINESCENT DOSEMETERS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; MONITORING; OCEANIA; RADIATION DOSE DISTRIBUTIONS; RESIDENTIAL BUILDINGS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/382 (Item 82 from file: 103)
02340470 AIX-20-045053; EDB-89-086438
Title: Handling of radioactive fallout problems at Chernobyl accident (1986) as compared with that of Bikini accident (1954)
Author(s): Nishiwaki, Y.; Kawai, H.; Morishima, H.; Koga, T.; Niwa, T.; Sugimura, Y.
Affiliation: Kinki Univ., Higashi-Osaka, Osaka (Japan). Atomic Energy Research Inst. Meteorological Research Institute, Tsukuba (Japan)
Title: Radiation protection practice. IRPA 7
Corporate Source: International Radiation Protection Association, Washington, DC (USA) Australian Radiation Protection Society, Sydney (Australia)
Conference Title: 7. international congress of the International Radiation Protection Association
Conference Location: Sydney, Australia Conference Date: 10 Apr 1988

5003714

Publication Date: 1988 p 1102-1105
Report Number(s): CONF-880404-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: ETD8900
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
Country of Origin: Australia
Country of Publication: Australia
Abstract: We conducted an analysis in Japan of the highly radioactive fall-out on the Japanese fishing boat No. 5 Fukuryu Maru that was engaged in fishing about 150 km east of Bikini at the time of the thermonuclear test conducted early in the morning of 1 March 1954, and which returned to Japan in the middle of the same month.
Major Descriptors: *CHERNOBYLSK-4 REACTOR -- CONTAMINATION; *FALLOUT DEPOSITS -- JAPAN; *FISSION PRODUCT RELEASE; *PERSONNEL -- RADIATION ACCIDENTS; *REACTOR ACCIDENTS -- CONTAMINATION
Descriptors: ACTIVITY LEVELS; AIR; BETA DETECTION; BETA SPECTRA; BIKINI; CALCITE; CESIUM 137; COMPARATIVE EVALUATIONS; DUSTS; GAMMA RADIATION; GLOBAL FALLOUT; IODINE 131; IRRADIATION; ISOTOPE RATIO; KRYPTON 85; LOCAL FALLOUT; PARTICLE SIZE; RADIATION DOSES; RADIATION SYNDROME; RADIOACTIVITY; RARE GASES; SEAFOOD; SOCIO-ECONOMIC FACTORS; SOURCE TERMS; THERMONUCLEAR EXPLOSIONS; TUNA; URANIUM 237
Broader Terms: ACCIDENTS; ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH METAL COMPOUNDS; ANIMALS; AQUATIC ORGANISMS; ASIA; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CALCIUM CARBONATES; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBONATE MINERALS; CARBONATES; CESIUM ISOTOPES; CHARGED PARTICLE DETECTION; DAYS LIVING RADIOISOTOPES; DETECTION; DOSES; ELECTROMAGNETIC RADIATION; ELEMENTS; ENRICHED URANIUM REACTORS; EVEN-ODD NUCLEI; EXPLOSIONS; FALLOUT; FISH PRODUCTS; FISHES; FLUIDS; FOOD; GASES; GRAPHITE MODERATED REACTORS; HEAVY NUCLEI; HOURS LIVING RADIOISOTOPES; INSTITUTIONAL FACTORS; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; IONIZING RADIATIONS; ISLANDS ; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; KRYPTON ISOTOPES; LWGR TYPE REACTORS; MARSHALL ISLANDS; MICRONESIA; MINERALS; NONMETALS; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; POWER REACTORS; RADIATION DETECTION; RADIATIONS; RADIOISOTOPES; REACTORS; SIZE; SPECTRA; THERMAL REACTORS; URANIUM ISOTOPES; VERTEBRATES; WATER COOLED REACTORS; YEARS LIVING RADIOISOTOPES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
553004 -- Agriculture & Food Technology -- Food Protection & Preservation -- (1987-)
655003 -- Medical Physics -- Dosimetry
INIS Subject Categories: C5100* -- Actual Accidents
C4300 -- Food Protection & Preservation
C5500 -- Personnel Dosimetry & Monitoring

10/5/383 (Item 83 from file: 103)
02311422 EDB-89-057162
Title: Bikini Atoll groundwater development
Author(s): Peterson, F.L.
Affiliation: Univ. of Hawaii, Honolulu (USA)
Conference Title: 98. annual meeting of the Geological Society of America
Conference Location: Orlando, FL, USA Conference Date: 28 Oct 1985
Source: Geol. Soc. Am., Abstr. Programs (United States) v 17. Coden: GAAPB
Publication Date: 1985 p 687
Report Number(s): CONF-8510489-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: ETD8980
Subfile: ETD (Energy Technology Data Exchange); INS (US Atomindex input). JMT (DOE contractor)
Country of Origin: United States
Abstract: Nuclear weapons testing during the 1950's has left the soil and

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ground water on Bikini Atoll contaminated with cesium-137, and to a lesser extent, strontium-90. Plans currently are underway for the clean-up and resettlement of the atoll by removal of approximately the upper 30 cm of soil. Any large-scale resettlement program must include provisions for water supply. This will be achieved principally by catchment and storage of rain water, however, since rainfall in Bikini is highly seasonal and droughts occur frequently, ground water development must also be considered. The quantity of potable ground water that can be developed is limited by its salinity and radiological quality. The few ground water samples available from Bikini, which have been collected from only about the top meter of the groundwater body, indicate that small bodies of potable ground water exist on Bikini and Eneu, the two principal living islands, but that cesium and strontium in the Bikioni ground water exceed drinking water standards. In order to make a reasonable estimate of the ground water development potential for the atoll, some 40 test boreholes will be drilled during July/August 1985, and a program of water quality monitoring initiated. This paper will describe preliminary results of the drilling and monitoring work.

Major Descriptors: *AQUIFERS -- HYDROLOGY; *AQUIFERS -- RADIONUCLIDE MIGRATION; *GROUND WATER -- CONTAMINATION; *GROUND WATER -- RESOURCE DEVELOPMENT; *ISLANDS -- AQUIFERS; *ISLANDS -- GROUND WATER

Descriptors: CESIUM 137; LAND POLLUTION; LAND RECLAMATION; MONITORING; RADIATION HAZARDS; RADIOACTIVE WASTES; RESOURCE POTENTIAL; SOILS; STRONTIUM 90; WATER POLLUTION; WATER RECLAMATION; WATER RESOURCES; WATER SUPPLY

Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; HAZARDS; HEALTH HAZARDS; HYDROGEN COMPOUNDS; INTERMEDIATE MASS NUCLEI; ISOTOPES; MASS TRANSFER; MATERIALS; NUCLEI; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; POLLUTION; RADIOACTIVE MATERIALS; RADIOISOTOPES; RESOURCES; STRONTIUM ISOTOPES; WASTES; WATER; YEARS LIVING RADIOISOTOPES

Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)

INIS Subject Categories: B3200* -- Water

10/5/384 (Item 84 from file: 103)

02293028 ERA-14-017157; EDB-89-038765

Author(s): Robison, W.L.; Conrado, C.L.; Stuart, M.L.

Title: Radiological conditions at Bikini Atoll: Radionuclide concentrations in vegetation, soil, animals, cistern water, and ground water

Corporate Source: Lawrence Livermore National Lab., CA (USA)

Publication Date: 31 May 1988 p 246

Report Number(s): UCRL-53840

Order Number: DE89007683

Contract Number (DOE): W-7405-ENG-48

Note: Portions of this document are illegible in microfiche products

Document Type: Report

Language: English

Journal Announcement: ETD8900

Availability: NTIS, PC A11/MF A01 - OSTI; 1.

Subfile: ETD (Energy Technology Data Exchange); NTS (NTIS); ERA (Energy Research Abstracts). TIC (Technical Information Center)

Country of Origin: United States

Country of Publication: United States

Abstract: This report is intended as a resource document for the eventual cleanup of Bikini Atoll and contains a summary of the data for the concentrations of /sup 137/Cs, /sup 90/Sr, /sup 239 +240/Pu, and /sup 241/Am in vegetation through 1987 and in soil through 1985 for 14 islands at Bikini Atoll. The data for the main residence island, Bikini, and the most important island, Eneu, are extensive; these islands have been the subject of a continuing research and monitoring program since 1974. Data for radionuclide concentrations in ground water, cistern water, fish and other marine species, and pigs from Bikini and Eneu Islands are presented. Also included are general

summaries of our resuspension and rainfall data from Bikini and Enèu Islands. The data for the other 12 islands are much more limited because samples were collected as part of a screening survey and the islands have not been part of a continuing research and monitoring program. Cesium-137 is the radionuclide that produces most of the estimated dose for returning residents, mostly through uptake by terrestrial foods and secondly by direct external gamma exposure. Remedial measures for reducing the /sup 137/Cs uptake in vegetation are discussed. 40 refs., 32 figs., 131 tabs.

Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *BIKINI -- RADIATION MONITORING; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *ENIWETOK -- RADIATION MONITORING; *NUCLEAR EXPLOSIONS -- FALLOUT; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION

Descriptors: DOSE EQUIVALENTS; FISHES; GROUND WATER; PARTICLE RESUSPENSION; PLANTS; REMEDIAL ACTION; SAMPLING; SOILS; SWINE; TESTING

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DOMESTIC ANIMALS; ECOLOGICAL CONCENTRATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES ; MAMMALS; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; WATER; YEARS LIVING RADIOISOTOPES

Subject Categories: 054000* -- Nuclear Fuels -- Health & Safety
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
510500 -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)

10/5/385 (Item 85 from file: 103)
02289984 AIX-20-018451; EDB-89-035720
Author(s): Dibblin, Jane.
Title: Day of two suns. US nuclear testing and the Pacific Islanders
Publisher: Virago Press,London, UK
Publication Date: 1988 p 309
Document Type: Book
Language: English
Journal Announcement: ETD8960
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex input AIX)
Country of Origin: United Kingdom
Country of Publication: United Kingdom

Abstract: The book focuses on two Pacific communities affected by nuclear testing, the people of Rongelap atoll irradiated by fallout, and the people of Kwajalein atoll forced to leave their islands so it could be used as a target area for missiles launched from the western USA. Both atolls are part of the Marshall Islands which are on the eastern side of the groups of islands known as Micronesia. The USA conducted 66 nuclear tests in the period 1946-1958, one on Bikini Island, codenamed Bravo, causing the contamination of Rongelap. Following the halting of atmospheric nuclear explosions in 1958 the area became a missile testing target area. The reasons why the Marshall Islands were used, the effects of the fallout and destruction of the islanders way of life when they were moved from their homes is described. It draws widely on experience of the Marshall Islanders themselves. One of the appendices lists the tests and displacement in the Marshall Islands in chronological order. (U.K.).

Major Descriptors: *BRAVO EVENT -- ENVIRONMENTAL IMPACTS; *MARSHALL ISLANDS -- EVACUATION; *MARSHALL ISLANDS -- LOCAL FALLOUT; *NUCLEAR WEAPONS -- TEST FACILITIES

Descriptors: BIOLOGICAL RADIATION EFFECTS; CONTAMINATION; HISTORICAL ASPECTS; MISSILES; PACIFIC OCEAN; USA

BIOLOGICAL EFFECTS; CASTLE PROJECT; EXPLOSIONS; FALLOUT;

ISLANDS; MICRONESIA; NORTH AMERICA; NUCLEAR EXPLOSIONS; OCEANIA; RADIATION EFFECTS; SEAS; SURFACE EXPLOSIONS; SURFACE WATERS; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
290600 -- Energy Planning & Policy -- Nuclear Energy
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
F1400 -- Social Impact of Nuclear Science & Technology

10/5/386 (Item 86 from file: 103)
02263442 GRA-88-00796; EDB-89-009173
Title: Nuclear test summary - trinity-hardtack. Sanitized
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: 15 Aug 1962 p 271
Report Number(s): AD-A-955363/7/XAB; DASA-1220-SAN
Note: Supersedes report dated 1 May 1959
Document Type: Report; Numerical data
Language: English
Journal Announcement: ETD8979
Availability: NTIS, PC A12/MF A01.
Subfile: ETD (Energy Technology Data Exchange); ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *ATMOSPHERIC EXPLOSIONS -- TRINITY EVENT; *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- ATMOSPHERIC EXPLOSIONS; *TRINITY EVENT
Descriptors: EXPERIMENTAL DATA
Broader Terms: ATMOSPHERIC EXPLOSIONS; DATA; EXPLOSIONS; INFORMATION; NUCLEAR EXPLOSIONS; NUMERICAL DATA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/387 (Item 87 from file: 103)
02263434 GRA-88-50252; EDB-89-009165
Author(s): Henry, T.W.; Wardlaw, B.R.
Title: Pacific Enewetak Atoll Crater Exploration (PEACE) Program, Enewetak Atoll, Republic of the Marshall Islands. Part 4. Analysis of borehole gravity surveys and other geologic and bathymetric studies in vicinity of Oak and Koa craters
Corporate Source: Geological Survey, Denver, CO (USA)
Publication Date: 1987 p 399
Report Number(s): AD-A-197314/8/XAB; -87-665
Note: See also Part 3, AD-A177 705. Includes envelope with 9 charts
Document Type: Report
Language: English
Journal Announcement: ETD8979
Availability: NTIS, PC A17/MF A01.
Subfile: ETD (Energy Technology Data Exchange); ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The Pacific Enewetak Atoll Crater Exploration (PEACE) Program was established to resolve a number of questions for the Department of Defense (DOD) about the geologic and material-properties parameters of two craters (KOA and OAK), formed by near-surface bursts of high-yield thermonuclear devices on the northern margin of Enewetak Atoll, Marshall Islands, in 1958. The multidisciplinary studies conducted by the USGS in collaboration with other organizations during 1984 through 1987 were part of a much larger research initiative by the DNA to better understand the dynamic properties of strategic-scale nuclear bursts and the relevance of the Pacific Proving Grounds (PPG) craters to issues of strategic basing and targeting of nuclear weapons. Major topics include: Borehole gravity; Palentologic evidence for mixing; Electron paramagnetic resonance studies; Bathymetric studies of OAK crater; Constraints on densification and piping for OAK; and Additional studies of geologic crater models.

*NUCLEAR EXPLOSIONS -- CRATERS
Descriptors: BARGES; BATHYMETRY; DENSITY; DYNAMICS; GEOLOGIC MODELS; GEOLOGY; GRAVIMETRY; MARSHALL ISLANDS; PALEONTOLOGY; STRATIGRAPHY; YIELDS
Broader Terms: CAVITIES; EXPLOSIONS; GEOLOGY; ISLANDS; MARSHALL ISLANDS; MECHANICS; MICRONESIA; OCEANIA; PHYSICAL PROPERTIES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/388 (Item 88 from file: 103)
02255527 EDB-89-001256
Author(s): Ratajczak, A.F.
Title: Report of refurbishment of Utirik photovoltaic system
Corporate Source: National Aeronautics and Space Administration, Cleveland, OH (USA). Lewis Research Center
Publication Date: 11 Oct 1988 p 20
Report Number(s): DOE/ET/20485-T4
Order Number: DE89003988
Contract Number (DOE): AI01-76ET20485
Note: Paper copy only, copy does not permit microfiche production
Document Type: Report
Language: English
Journal Announcement: ERA8900
Availability: NTIS, PC A03 - OSTI; 3.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: This report describes the repairs and modifications made to the Photovoltaic Power system installed on the island of Utirik in the Republic of the Marshall Islands in the Micronesia region of the Pacific.
Major Descriptors: *PHOTOVOLTAIC POWER PLANTS -- REPAIR
Descriptors: COST; ELECTRIC BATTERIES; MARSHALL ISLANDS; MODIFICATIONS; OFF-PEAK ENERGY STORAGE; SOLAR BATTERY CHARGERS; TRAVEL
Broader Terms: BATTERY CHARGERS; ELECTROCHEMICAL CELLS; ENERGY STORAGE; EQUIPMENT; ISLANDS; MICRONESIA; OCEANIA; POWER PLANTS; SOLAR EQUIPMENT; SOLAR POWER PLANTS; STORAGE
Subject Categories: 140600* -- Solar Energy -- Photovoltaic Power Systems

10/5/389 (Item 89 from file: 103)
02243588 AIX-19-100691; ERA-14-001608; EDB-88-186332
Title: Historical review of Bikini radiation accident in 1954 and radiation protection in Japan
Author(s): Kumatori, T.
Affiliation: Radiation Effects Association, Tokyo (Japan)
Title: Proceedings of the 6. Japan-Brazil Symposium on Science and Technology
Corporate Source: Academia de Ciencias do Estado de Sao Paulo (Brazil)
Conference Title: 6. Japan-Brazil symposium on science and technology
Conference Location: Sao Paulo, Brazil Conference Date: 10 Aug 1988
Publication Date: 1988 p 47
Report Number(s): ACIESP-60-Vol.1; CONF-8808156-
Order Number: DE88704411
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: ETD8811
Availability: NTIS (US Sales Only), PC A08/MF A01.
Subfile: ETD (Energy Technology Data Exchange); ERA (Energy Research Abstracts). INIS (non-US Atomindex input AIX)
Country of Origin: Brazil
Country of Publication: Brazil
Abstract: None
Major Descriptors: *BIKINI -- HISTORICAL ASPECTS; *BIKINI -- THERMONUCLEAR EXPLOSIONS; *JAPANESE ORGANIZATIONS -- RADIATION PROTECTION; *JAPANESE

VICTIMS COMPENSATION
Descriptors: BIOLOGICAL RADIATION EFFECTS; RADIATION ACCIDENTS
Broader Terms: ACCIDENTS; BIOLOGICAL EFFECTS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; NUCLEAR EXPLOSIONS; OCEANIA; RADIATION EFFECTS
Subject Categories: 450201* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives -- Containment
INIS Subject Categories: E1400* -- Nuclear Explosions

10/5/390 (Item 90 from file: 103)
02223001 EDB-88-165742
Author(s): Johnson, V.M.
Title: Procedures for processing satellite-transmitted weather data: Conversion of data from the HP (Hewlett-Packard) computer to the IBM PC system
Corporate Source: Lawrence Livermore National Lab., CA (USA) Johnson (Virginia M.), Hayward, CA (USA)
Publication Date: 30 Jun 1988 p 38
Report Number(s): UCRL-21078
Order Number: DE88016193
Contract Number (DOE): W-7405-ENG-48
Note: Portions of this document are illegible in microfiche products
Document Type: Report
Language: English
Journal Announcement: ERA
Availability: NTIS, PC A03/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: Since 1982, weather data from three sites in the Marshall Islands have been transmitted by satellite, retrieved by a local communications program, and stored on disk. Occasionally, descriptive reports were generated displaying rainfall and insolation data from this database. Both the data storage and processing programs resided on a Hewlett-Packard desktop computer system no longer in use by researchers in Environmental Sciences. Furthermore, the format and processing of data over the six years the system has been in operation have not been consistent. The goals of this conversion project were to document the existing data formats, develop processing program(s) capable of managing the various formats, and establish procedures for the continuing transfer of new data from the GOES system in Virginia to its final storage on an IBM PC system. To achieve these goals, the following materials were developed: the computer program MITRANS, which translates raw data retrieved by the old communications program into edited, self-documenting files organized by site and year, nineteen consolidated data input files, which contain all data from 1982 to May 31, 1988, a comprehensive data dictionary, reflecting all that is known about the 13 different data formats that have been used over the last 6 years, procedures for managing the communications program still running on the Hewlett-Packard computer and transferring its raw data files to the IBM PC, sample input and output files that test the various data formats, and this project report and reference manual. 20 figs., 3 tabs.
Major Descriptors: *WEATHER -- DATA PROCESSING
Descriptors: COMMUNICATIONS; DATA TRANSMISSION; HP COMPUTERS; IBM COMPUTERS ; PERSONAL COMPUTERS; SATELLITES
Broader Terms: COMMUNICATIONS; COMPUTERS; DIGITAL COMPUTERS; PROCESSING
Subject Categories: 990210* -- Supercomputers -- (1987-1989)

10/5/391 (Item 91 from file: 103)
02214079 GRA-88-50061; ERA-13-049477; EDB-88-156819
Author(s): Goetz, J.; Klemm, J.; Phillips, J.; Thomas, C.
Title: Analysis of radiation exposure - service personnel on Rongerik Atoll: Operation Castle - Shot Bravo. Technical report, 12 March

Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 9 Jul 1987 p 49
Report Number(s): AD-A-193520/4/XAB; SAIC-86/1608
Document Type: Report
Language: English
Journal Announcement: ETD8809
Availability: NTIS, PC A03/MF A01.
Subfile: ETD (Energy Technology Data Exchange); ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: External and internal doses are reconstructed for the 28 American servicemen stationed on Rongerik Atoll, Marshall Islands, who were exposed to fallout on 1-2 March 1954 from Shot Bravo of Operation CASTLE. External doses are determined from limited radiation survey and film-badge information. Internal-dose commitments are derived from urinalysis data. The magnitude of the calculated activity intake suggests the principal pathways. Reconstructed film-badge doses are approximately 40 rem, with adjustments from individual activity scenarios, as available. Internal dose commitments to the thyroid and large intestine (nearly all first-year dose) provide the only significant increments to the external dose. Total doses are approximately 230 rem to the thyroid, 115 rem to the lower large intestine, 85 rem to the upper large intestine, and about 40 to 50 rem to all other organs.
Major Descriptors: *BRAVO EVENT -- RADIATION DOSES; *CASTLE PROJECT -- BRAVO EVENT; *MARSHALL ISLANDS -- CASTLE PROJECT; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- CASTLE PROJECT
Descriptors: FALLOUT; INHALATION; INTESTINES; PROGRESS REPORT; RADIOACTIVE MATERIALS; SURVEYS; URINE
Broader Terms: BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY; BODY FLUIDS; CASTLE PROJECT; DIGESTIVE SYSTEM; DOCUMENT TYPES; DOSES; EXPLOSIONS; GASTROINTESTINAL TRACT; INTAKE; ISLANDS; MATERIALS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; ORGANS; PERSONNEL; SURFACE EXPLOSIONS; WASTES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560151 -- Radiation Effects on Animals -- Man

10/5/392 (Item 92 from file: 103)
02207170 ERA-13-047320; EDB-88-149909
Author(s): Oberdorfer, J.A.; Buddemeier, R.W.
Title: Climate change: Effects on reef island resources
Corporate Source: Lawrence Livermore National Lab., CA (USA) San Jose State Univ., CA (USA). Dept. of Geology
Conference Title: 6. international coral reef symposium
Conference Location: Townsville, Australia Conference Date: 8 Aug 1988
Publication Date: 27 Jun 1988 p 5
Report Number(s): UCRL-98880; CONF-880873-3
Order Number: DE88014145
Contract Number (DOE): W-7405-ENG-48
Note: Paper copy only, copy does not permit microfiche production
Document Type: Report; Conference literature
Language: English
Journal Announcement: ETD
Availability: NTIS, PC A02; 3.
Subfile: ETD (Energy Technology Data Exchange); NTS (NTIS); ERA (Energy Research Abstracts). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: The salinity, depth, quantity, and reliability of fresh groundwater resources on coral reef islands and coastlines are environmentally important parameters. Groundwater influences or controls the terrestrial flora, salinity, and nutrient levels in the near-shore benthic environment, the rate and nature of sediment

Indo-Pacific reef islands suggest that freshwater inventory is a function of rainfall and island dimensions. A numerical model (SUTRA) has been used to simulate the responses of atoll island groundwater to changes in recharge (precipitation), sea level, and loss of island area due to flooding. The model has been calibrated for Enjebi Island, Enewetak Atoll, where a moderately permeable, water-table aquifer overlies a high-permeability formation. Total freshwater inventory is a monotonic but nonlinear function of recharge. If recharge and island area are constant, rising sea level increases the inventory of fresh water by increasing the useful volume of the aquifer above the high-permeability zone. Flooding of land area reduces the total freshwater inventory approximately in proportion to the loss of recharge area. The most significant results of the model simulation, however, are the findings that the inventory of low-salinity water (and by extrapolation, potable water) is disproportionately sensitive to changes in recharge, island dimensions, or recharge. Island freshwater resources may therefore be unexpectedly vulnerable to climate change.
Major Descriptors: *CLIMATES -- ENVIRONMENTAL IMPACTS; *GROUND WATER -- AVAILABILITY; *ISLANDS -- REEFS; *WATER TABLES -- RESPONSE MODIFYING FACTORS
Descriptors: AQUIFERS; ENIWETOK; EVALUATION; MATHEMATICAL MODELS; RAIN; RECHARGE; S CODES
Broader Terms: ATMOSPHERIC PRECIPITATIONS; COMPUTER CODES; GEOLOGIC STRUCTURES; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; WATER
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)

10/5/393 (Item 93 from file: 103)
02200486 ERA-13-043901; EDB-88-143224
Title: Miscellaneous species records of Enewetak Atoll
Author(s): Titgen, R.H.; Burch, B.L.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 337-343
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The aim of this report is to provide a checklist of miscellaneous plant and animal species recorded at Eniwetok. The list includes some fossil material and/or material from drill cores.
Major Descriptors: *ANIMALS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY; *PLANTS -- TAXONOMY
Descriptors: DRILL CORES; SITE CHARACTERIZATION; SPECIES DIVERSITY
Broader Terms: BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/394 (Item 94 from file: 103)
02200485 ERA-13-043900; EDB-88-143223
Title: Mammals of Enewetak Atoll
Author(s): Reese, E.S.; Devaney, D.M.; Reese, E.S.; Burch, B.L.;

Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 333-335
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Although man is the dominant mammal of Eniwetok, marine mammals are occasional visitors there. Twenty-seven species of whales, dolphins, and porpoises may be expected to occur at Eniwetok Atoll. A checklist is provided of the mammals of Eniwetok.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *MAMMALS -- SPECIES DIVERSITY; *MAMMALS -- TAXONOMY
Descriptors: SITE CHARACTERIZATION
Broader Terms: ANIMALS; BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/395 (Item 95 from file: 103)
02200484 ERA-13-043899; EDB-88-143222
Title: Birds of Enewetak Atoll
Author(s): Berger, A.J.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 331-332
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Most of the seabirds that occur at Eniwetok have a very wide range in the Pacific basin, and they have not been shown to demonstrate a tendency for subspeciation. Because of its geographical location, Eniwetok provides a nesting habitat for some species whose primary breeding range is north of the atoll and for others whose primary breeding range is south of it. Approximately 17 species of shorebirds that nest in Alaska or Siberia have been recorded as migrating to the Eniwetok Atoll in winter. A checklist of Eniwetok birds is presented.
Major Descriptors: *BIRDS -- SPECIES DIVERSITY; *BIRDS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: SITE CHARACTERIZATION
Broader Terms: ANIMALS; BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies --

10/5/396 (Item 96 from file: 103)
02200483 ERA-13-043898; EDB-88-143221
Title: Reptiles of Enewetak Atoll
Author(s): Lamberson, J.O.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Environmental Protection Agency, Newport, OR (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 325-329
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The goals of this report are to provide a checklist of all the reptiles found on Eniwetok. Seven species of lizards and one species of blind snake comprise the known terrestrial herpetofauna there. Species found on nearby atolls may also be present on Eniwetok; however, no additional species have been collected from there. No amphibians or sea snakes have been found on Eniwetok. The biogeography and the ecology of the reptiles found there are presented.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *REPTILES -- TAXONOMY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; BIOLOGY; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; VERTEBRATES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/397 (Item 97 from file: 103)
02200482 ERA-13-043897; EDB-88-143220
Title: Annotated checklist of the fishes of Enewetak Atoll and other Marshall Islands
Author(s): Randall, J.E.; Randall, H.A.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 289-324
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: This report provides a checklist of the reef, shore, and epipelagic fishes known from the Marshall Islands. A total of 817 species in 338 genera and 92 families is recorded. Deep-water fishes have been omitted from the checklist because only a few such fishes have been reported from the area. An attempt is made to illustrate a few of the most conspicuous species.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *FISHES -- SPECIES

Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGY; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; VERTEBRATES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/398 (Item 98 from file: 103)
02200481 ERA-13-043896; EDB-88-143219
Title: Protochordates of Enewetak Atoll
Author(s): Eldredge, L.G.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Guam, Mangilao
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 287-288
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Publication: United States
Abstract: Few protochordates have been recorded from Eniwetok Atoll. A checklist of Ascidians and Cephalochordates from Eniwetok is included.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *VERTEBRATES -- TAXONOMY
Descriptors: SITE CHARACTERIZATION
Broader Terms: ANIMALS; BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/399 (Item 99 from file: 103)
02200480 ERA-13-043895; EDB-88-143218
Title: Echinodermata other than Holothuroidea of Enewetak Atoll
Author(s): Devaney, D.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 277-285
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: An attempt is made to bring together numerous records on the echinoderm fauna other than the holothurians at Eniwetok. In comparison with the Marshall Islands as a whole, knowledge of the Eniwetok echinoderms is considerable. A checklist is included of the echinoderm nonholothurian species of Eniwetok.
Major Descriptors: *ECHINODERMS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY

Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/400 (Item 100 from file: 103)
02200479 ERA-13-043894; EDB-88-143217
Title: Holothurians of Enewetak Atoll
Author(s): Cutress, B.M.; Rowe, F.W.E.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Puerto Rico, Mayagueez
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 263-275
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: Puerto Rico
Country of Publication: United States
Abstract: An attempt is made to list the holothurians recorded on Eniwetok. A number of identified species are discussed in relation to their biogeography and ecology. Most of the species of holothurians recorded in the checklist were included in an unpublished systematic report by B. M. Cutress prepared for the Mid-Pacific Research Laboratory in 1956. Collection records based on that study are presented in the Appendix.
Major Descriptors: *ECHINODERMS -- SPECIES DIVERSITY; *ECHINODERMS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/401 (Item 101 from file: 103)
02200478 ERA-13-043893; EDB-88-143216
Title: Crustacea Decapoda (Brachyura and Anomura) of Enewetak Atoll
Author(s): Garth, J.S.; Haig, J.; Knudsen, J.W.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Southern California, Los Angeles (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 235-261
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States

crabs found at Eniwetok. An attempt is made to indicate their biogeographic implications and to summarize their ecology. The Anomura presently known from Eniwetok Atoll comprise 76 species, representing 29 genera and 10 families. Of this number, 48 species are new to Eniwetok, and 43 are new to the Marshall Islands as well. The Brachyura presently known from Eniwetok Atoll comprise 291 species, representing 115 genera and 16 families. Of this number, 218 species are new to Eniwetok, and 170 are new to the Marshall Islands as well.
Major Descriptors: *DECAPODS -- SPECIES DIVERSITY; *DECAPODS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGY; CRUSTACEANS ; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/402 (Item 102 from file: 103)
02200477 ERA-13-043892; EDB-88-143215
Title: Crustacea decapoda (Penaeidea, Stenopodidea, Caridea, and Palinura) of Enewetak Atoll
Author(s): Devaney, D.M.; Bruce, A.J.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 221-233
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Biological surveys made during 1946 and 1947 in the northern Marshall Islands included faunal collections that resulted in a publication by Chace (1955) on several groups of shrimps. In this work, six species of sergestid, pasiphaeid, processid, and alpheid shrimps were recorded from Enewetak. Since then the number of taxa from the atoll has increased until now nearly 150 decapod shrimp and lobster species are recognized. Pontoniines and alpheids account for 73% (106 species) of the total number. There are several new records not only for Enewetak but also for the Marshalls, and in some cases, for the Pacific. A taxonomic checklist and a section on collection data for new records are provided.
Major Descriptors: *DECAPODS -- SPECIES DIVERSITY; *DECAPODS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; LOBSTERS; SHRIMP; SITE CHARACTERIZATION; SURVEYS; TABLES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGY; CRUSTACEANS ; DATA; DECAPODS; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

5003727

10/5/403 (Item 103 from file: 103)
02200476 ERA-13-043891; EDB-88-143214

Author(s): Kornicker, L.S.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Smithsonian Institution, Washington, DC (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 217-219
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Ostracods in the superorder Mydocopa, excluding the planktonic suborder Halocypridina, which is outside the scope of the present report, have not previously been reported from Micronesia. A comprehensive checklist of Ostracoda from southeast Asia is concerned with the area between 25/sup 0/N and 11/sup 0/S latitude and 140/sup 0/E and 85/sup 0/E longitude. The area includes the western edge of Micronesia, but a brief perusal of the checklist revealed no listing of specimens from Micronesia. A small collection of Enewetak ostracods in the suborder Myodocopina at the National Museum of Natural History, Smithsonian Institution, contains members of all five families that comprise the suborder. Although the species in the collection are capable of swimming, and do so occasionally, they spend most of their existence crawling on, or burrowing in, the substrate. An exception to this is members of the mainly pelagic genus Cypridina, which is represented in the collection by two species. Some of the Enewetak specimens are illustrated.
Major Descriptors: *ARTHROPODS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: SITE CHARACTERIZATION
Broader Terms: ANIMALS; BIOLOGY; ECOLOGY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/404 (Item 104 from file: 103)
02200475 ERA-13-043890; EDB-88-143213
Title: Lagoon plankton of Enewetak Atoll
Author(s): Gerber, R.P.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: St. Joseph's College, Windham, ME (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 203-216
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Studies on the species composition of lagoon zooplankton at Enewetak Lagoon and nearby atolls have for the most part focused on the holoplanktonic organisms, forms that are permanently planktonic all of

Because information is lacking on the life history of many of the species mentioned, some meroplanktonic forms - organisms that are temporarily planktonic - are no doubt included in this checklist. A variety of sampling methods have been used to collect the zooplankton, and each method has its inherent advantages and disadvantages. In a sense it is perhaps fortunate that no one method is best to sample the various types of zooplankton. One important aspect lacking in the data is adequate seasonal samplings to provide information on how species composition and abundance change over time. Whereas most of the lagoon plankton studies were based on samples collected over a few days in one season, the present author has sampled more extensively, during two winter periods and one summer period.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *ZOOPLANKTON -- SPECIES DIVERSITY; *ZOOPLANKTON -- TAXONOMY
Descriptors: COMPILED DATA; SAMPLING; SEASONAL VARIATIONS; SITE CHARACTERIZATION; TABLES
Broader Terms: AQUATIC ORGANISMS; BIOLOGY; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; PLANKTON; VARIATIONS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/405 (Item 105 from file: 103)
02200474 ERA-13-043889; EDB-88-143212
Title: Nonplanktonic copepoda of Enewetak Atoll
Author(s): Devaney, D.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 197-201
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The copepod fauna of Enewetak is based on studies carried out on symbiotic (commensal and parasitic) species as well as those found as part of the plankton community. A checklist of copepod fauna is included.
Major Descriptors: *COPEPODS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; SYMBIOSIS; TABLES; ZOOPLANKTON
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGY; CRUSTACEANS ; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; PLANKTON
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/406 (Item 106 from file: 103)
02200473 ERA-13-043888; EDB-88-143211
Title: Cirripedia of Enewetak Atoll
Author(s): Titgen, R.H.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)

systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 191-195
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: There has been relatively little research done on barnacles at Eniwetok. Only nine species have been reported from there. A checklist of barnacles found at Eniwetok Atoll is presented. The list also includes species that probably occur there because so few of the species that may occur there have been reported.
Major Descriptors: *CRUSTACEANS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/407 (Item 107 from file: 103)
02200472 ERA-13-043887; EDB-88-143210
Title: Stomatopod crustacea of Enewetak Atoll
Author(s): Reaka, M.L.; Manning, R.B.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Maryland, College Park (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 181-190
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: This study provides a checklist and discusses the biogeographic relationships of the 12 species of Stomatopoda (mantis shrimps) now known to occur on Enewetak Atoll. Five species are widely distributed throughout the Indo-West Pacific region, and three species have somewhat more restricted ranges in the Indo-West Pacific and Indian Ocean. Four species are endemic to the Central Pacific (two to Enewetak), and three taxa need further taxonomic investigation, which may demonstrate further endemism. Stomatopods from Enewetak are dwarfed in body size compared to their mainland relatives. Small size has strong consequences for life history and evolutionary patterns in stomatopods, and in particular is likely to generate endemism. They provide information on the color patterns of the stomatopods from Enewetak, showing which traits are the most reliable indicators of species identity for taxonomic and field research and which traits are most likely to be influenced by body size, sex, or habitat. Several anomalies in usually invariant color traits are found in stomatopods from Aomon Island, which was closer to sources of radiation from atomic

what is known about the habitat and fighting behavior of the coral-dwelling mantis shrimps from Enewetak. for each of the above topics, they identify or discuss all previous literature on the stomatopods of Enewetak.
Major Descriptors: *CRUSTACEANS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: BEHAVIOR; COMPILED DATA; HABITAT; SITE CHARACTERIZATION; SPECIES DIVERSITY; TABLES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/408 (Item 108 from file: 103)
02200471 ERA-13-043886; EDB-88-143209
Title: Pycnogonida of Enewetak Atoll
Author(s): Child, C.A.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Smithsonian Institution, Washington, DC (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 179-180
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Pycnogonids are very scarce on Eniwetok with only five species in four genera known there. A sixth, Nymphon micronesicum is also known from Bikini. This is a very small fauncle when considering the great diversity of this class of arthropods in the oceans of the world. A checklist is included of Pycnogonida of Eniwetok Atoll.
Major Descriptors: *ARTHROPODS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: SITE CHARACTERIZATION; SPECIES DIVERSITY
Broader Terms: ANIMALS; BIOLOGY; ECOLOGY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/409 (Item 109 from file: 103)
02200470 ERA-13-043885; EDB-88-143208
Title: Insects and allies (Arthropoda) of Enewetak Atoll
Author(s): Samuelson, G.A.; Nishida, G.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 147-177
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808

Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Insects and related terrestrial arthropods of Enewetak Atoll remain inadequately investigated. Woodbury (1962) included an inventory of arthropods known from the atoll in which he indicated that ectoparasites were taken from 10 species of birds; altogether he reported 45 species or subspecies authentically recorded from the atoll. The present list increases the number of arthropods to 191 species (or subspecies) and must still be considered preliminary, as records are lacking for many expected groups. Before this list can be completed, further collections and their study are required, especially of the soil fauna, ectoparasites and nidicoles of reptiles, birds, and rodents, and the forms associated with humans and human habitations. A checklist of Enewetak insects and related arthropods is provided.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *INSECTS -- TAXONOMY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; ARTHROPODS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/410 (Item 110 from file: 103)
02200469 ERA-13-043884; EDB-88-143207
Title: Mollusca of Enewetak Atoll
Author(s): Kay, E.A.; Johnson, S.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 105-147
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Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: This report provides a check list of all the mollusks found on Eniwetok, both living and fossils. The most conspicuous species are illustrated and their ecology is summarized.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *MOLLUSCS -- TAXONOMY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

5003732

10/5/411 (Item 111 from file: 103)
02200468 ERA-13-043883; EDB-88-143206
Title: Polychaetes of Enewetak Atoll
Author(s): Devaney, D.M.; Bailey-Brock, J.H.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and

Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 97-103
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Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: An attempt is made to list the polychaetes recorded on Eniwetok. A number of identified species are discussed in relation to habitat, population density and location. A total of 132 polychaete species have been identified on Eniwetok.
Major Descriptors: *ANNELIDS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/412 (Item 112 from file: 103)
02200467 ERA-13-043882; EDB-88-143205
Title: Platyhelminthes, Nemertea, and Nematoda of Enewetak Atoll
Author(s): Devaney, D.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 95-96
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Except for some reports on parasitic nematodes and platyhelminthes in oysters, fish, and porpoises, little has been written about the platyhelminthes, nemertina, and nematoda of Enewetak Atoll. Little has been done on free-living nemertines or nematodes, although both groups must be abundant. The checklist is presented which gives the taxonomics of these species.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *INVERTEBRATES -- TAXONOMY; *NEMATODES -- TAXONOMY; *PLATYHELMINTHS -- TAXONOMY
Descriptors: SITE CHARACTERIZATION
Broader Terms: ANIMALS; ASCHELMINTHES; BIOLOGY; ECOLOGY; HELMINTHS; ISLANDS ; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/413 (Item 113 from file: 103)
02200466 ERA-13-043881; EDB-88-143204
5003733
Title: Sipunculans and echiurans of Enewetak Atoll
Author(s): Devaney, D.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.;

Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 93-94
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: At the present time at least 10 identified species of sipunculans are considered to occur at Eniwetok. Echiurans are previously unrecorded from Eniwetok or the other Marshall Islands. However, the bifurcate-tipped proboscis of a bonellid echiruan has been observed in the shallower waters of Eniwetok lagoon extending from beneath attached coral reef outcrops. A checklist of Eniwetok Sipuncula and Echiura is presented.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *INVERTEBRATES -- TAXONOMY
Descriptors: SITE CHARACTERIZATION
Broader Terms: ANIMALS; BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/414 (Item 114 from file: 103)
02200465 ERA-13-043880; EDB-88-143203
Title: Reef-dwelling bryozoans of Enewetak Atoll
Author(s): Cuffey, R.J.; Cox, R.S.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Pennsylvania State Univ., University Park (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 85-92
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The goals of this report are to list the bryozoans found on the modern reefs of Enewetak Atoll, illustrate the most conspicuous species, indicate their biogeographic implications, and summarize their ecology (particularly ecozonal distributions and constructional roles).
Major Descriptors: *BRYOZOA -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

02200464 ERA-13-043879; EDB-88-143202
Title: Brachiopods of Enewetak Atoll
Author(s): Grant, R.E.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: National Museum of Natural History, Washington, DC (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 77-84
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: On Eniwetok the brachiopods are small and inconspicuous, living in cryptic habitats under the shade of coral fronds, in recesses in the reef, or on lagoon pinnacles. An attempt is made to summarize the ecology of the brachiopods and the most conspicuous species are illustrated. A checklist is included of Eniwetok brachiopods.
Major Descriptors: *BRANCHIOPODS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGY; CRUSTACEANS ; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/416 (Item 116 from file: 103)
02200463 ERA-13-043878; EDB-88-143201
Title: Scleractinia (Stony Corals) of Enewetak Atoll
Author(s): Devaney, D.M.; Lang, J.C.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: B. P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 67-76
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Approximately 170 species in 54 genera have been identified among the 2500 stony coral specimens which were collected from 28 sites around Eniwetok Atoll. Although the field guide is still in preparation, a provisional checklist of scleractinian corals now believed to occur at Eniwetok is presented.
Major Descriptors: *CORALS -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: BIOLOGY; CNIDARIA; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)

(-1989)

10/5/417 (Item 117 from file: 103)
02200462 ERA-13-043877; EDB-88-143200
Title: Octocorallia of Enewetak Atoll
Author(s): Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 63-65
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The Alcyonaceans are the most numerous octocorals represented at Eniwetok with approximately 20 species now known. A checklist of octocorallia of Eniwetok Atoll is included.
Major Descriptors: *CNIDARIA -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: SITE CHARACTERIZATION
Broader Terms: BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/418 (Item 118 from file: 103)
02200461 ERA-13-043876; EDB-88-143199
Title: Sea anemones of Enewetak Atoll
Author(s): Cutress, C.E.; Arneson, A.C.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Puerto Rico, Mayagueez
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 53-62
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: Puerto Rico
Country of Publication: United States
Abstract: The sea anemones covered in this chapter were collected and/or photographed in part by Cutress during May and June 1955 and in part by Arneson from September through November 1980. Collection records are shown at the end of the chapter. Most identifications were made from preserved specimens, but a few were made from photographs alone. Available photographs of Phymanthus strandesi and Physobrachia douglasi are inadequate. Heterodactyla hemprichi was not photographed. No published taxonomic work on Enewetak sea anemones exists. Dunn (1981), in a revision of the clown-fish anemones, refers by catalog numbers to preserved specimens from Enewetak which she examined. Allen (1972) refers to and illustrates seven species of host anemones that he observed at Enewetak from 1968 to 1971. Josephson (1966) made physiological observations on Calliactis polypus, and Johannes et al.

as Actinodendron plumosum. A checklist is provided of Enewetak sea anemones.
Major Descriptors: *CNIDARIA -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION
Broader Terms: BIOLOGY; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/419 (Item 119 from file: 103)
02200460 ERA-13-043875; EDB-88-143198
Title: Porifera of Enewetak Atoll
Author(s): Devaney, D.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bernice P. Bishop Museum, Honolulu, HI (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 49-51
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The first sponges reported from Enewetak were based on collections made between 1946 and 1948 from a number of tropical Pacific areas (de Laubenfels, 1954). The Pacific Science Board of the National Research Council sponsored the collections project. Six of the 13 species recorded from Enewetak were collected by dredging near the center of the lagoon (8 km north of the south anchorage; approximately 11/sup 0/ 29' N, 165/sup 0/ 15' E, de Laubenfels, 1954) at a depth of 35 m. Another species came from the reef flat, and six were from unrecorded localities. Three new species were recorded from Enewetak, but only one (Lissodendoryx calypta) was unique to that atoll. A classification checklist of Porifera at Eniwetok is included.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TAXONOMY
Broader Terms: BIOLOGY; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/420 (Item 120 from file: 103)
02200459 ERA-13-043874; EDB-88-143197
Title: Recent Foraminifera and nonplanktonic protozoans
Author(s): Chave, E.H.; Devaney, D.M.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 37-47
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data

Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: An overview is presented of foraminiferal fauna and nonplanktonic protozoans at Eniwetok from 1946-1981. A checklist is presented which identifies 280 species.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *PROTOZOA -- TAXONOMY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION; TABLES
Broader Terms: ANIMALS; BIOLOGY; DATA; ECOLOGY; INFORMATION; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MICROORGANISMS; NUMERICAL DATA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/421 (Item 121 from file: 103)
02200458 ERA-13-043873; EDB-88-143196
Title: Natural history of terrestrial vascular plants of Enewetak Atoll
Author(s): Lamberson, J.O.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Environmental Protection Agency, Newport, OR (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 17-35
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Enewetak Atoll has evolved over geological time from a raised limestone island environment supporting mangrove swamps and an upland mixed forest to a low coral sand island habitat with typical strand vegetation. The 128 species of plants recorded from the atoll include many introduced weeds and ornamental or food plants, although 43% of the flora is considered to be indigenous to Micronesia. The dry, windy season from November through April causes many of the plants to drop some or all of their leaves or to die back completely. Summer-June through September - is the season of maximum plant growth and more flower and seed production. The effects of World War II and post-war military activity, the nuclear test program from 1948 to 1958, and the radiological cleanup and rehabilitation for the return of the people of Enewetak have been significant with regard to the vegetation. Many species were accidentally or intentionally introduced to the atoll, and some species have disappeared. The vegetation was greatly altered because of destruction of habitat with removal of soil and nutrients and exposure of the plants to salt spray and drying winds. Several collections and studies of the flora have been reported. This chapter describes stages in the succession of the vegetation following disturbance. The vegetation of the islands during the period 1975 to 1977 is also described in some detail.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *PLANTS -- ECOLOGICAL SUCCESSION; *PLANTS -- TAXONOMY
Descriptors: COMPILED DATA; NUCLEAR WEAPONS; SITE CHARACTERIZATION; TABLES; TERRESTRIAL ECOSYSTEMS; TESTING
Broader Terms: BIOLOGY; DATA; ECOLOGY; ECOSYSTEMS; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; WEAPONS

Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/422 (Item 122 from file: 103)
02200457 ERA-13-043872; EDB-88-143195
Title: Fungi of Enewetak Atoll
Author(s): Dunn, P.H.; Reynolds, D.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Dept. of Agriculture Forest Service, Riverside, CA (USA)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 11-15
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The microfungi of Enewetak Atoll are typical tropical forms and are not restricted to that atoll. Because of the extreme isolation of Enewetak, however, it seems likely that the fungi there are indigenous to the atoll and are not introductions by man. Whether the origin is terrestrial or from the beaches remains a question. The mycological data from Enewetak Atoll reflect two principles of fungal biogeography: similar regions have similar biotas, and distributions data are often due to bias collection activity of mycologists.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *FUNGI -- TAXONOMY
Descriptors: COMPILED DATA; SITE CHARACTERIZATION
Broader Terms: BIOLOGY; DATA; ECOLOGY; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; PLANTS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/423 (Item 123 from file: 103)
02200456 ERA-13-043871; EDB-88-143194
Title: Marine benthic algae of Enewetak Atoll
Author(s): Tsuda, R.T.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Guam, Mangilao
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 1-9
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Publication: United States
Abstract: The authors present knowledge of the floristics and ecology of the marine benthic algae on Pacific atolls is based primarily on studies conducted on Enewetak Atoll. There are more species of marine benthic algae known from this atoll than are known from any other Indo-Pacific atoll. On the basis of the papers cited above, 238 species

Cyanophyta (16 species), Chlorophyta (89 species), Phaeophyta (24 species), and Rhodophyta (109 species). Nine of the species were described as new with the Enewetak specimens serving as holotypes. It is interesting to note that 40 species (nine Chlorophyta, three Phaeophyta, and 28 Rhodophyta) or 16% of the species reported from Enewetak represent the only collections known from the geographic region of Micronesia. It is unlikely that these species are unique to Enewetak; further intensive collections from other areas in Micronesia will no doubt provide additional records.
Major Descriptors: *ALGAE -- TAXONOMY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: BENTHOS; SITE CHARACTERIZATION; TABLES
Broader Terms: AQUATIC ORGANISMS; BIOLOGY; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PLANTS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/424 (Item 124 from file: 103)
02200455 ERA-13-045742; EDB-88-143193
Title: Avifauna of Enewetak Atoll
Author(s): Berger, A.J.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 215-220
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: About 41 species of birds have been recorded at Eniwetok. The birds that have arrived there have had to be strong fliers. Many of the native seabirds are species that have a vast range in the Pacific region, and many of them spend only the breeding season on land. At least 12 species are known to breed on the atoll, and at least four other species are thought to nest there. Many other birds probably include Eniwetok within their range.
Major Descriptors: *BIRDS -- SPECIES DIVERSITY; *ENIWETOK -- BASELINE ECOLOGY
Descriptors: POPULATION DYNAMICS; SITE CHARACTERIZATION
Broader Terms: ANIMALS; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)

10/5/425 (Item 125 from file: 103)
02200454 INS-88-028040; ERA-13-045741; EDB-88-143192
Title: Biology of the rodents of Enewetak Atoll
Author(s): Jackson, W.B.; Vessey, S.H.; Bastian, R.K.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Bowling Green State Univ., OH (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 203-214
Report Number(s): DOE/EV/00703-T1-Vol.1

Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Roof rats and Polynesian rats, introduced to the atoll by 20th Century commerce and the Micronesians, respectively, were present allopatrically on the larger islets. Of necessity, they were largely vegetarians. Reproductive cycles were keyed to rainfall patterns. High density populations had high stress indices, including high parasite loads. The rats, at the top of the terrestrial food pyramid, constituted a bioenvironmental monitor that was rarely utilized during the several test programs. Bioconcentration of radioisotopes, especially /sup 137/Cs and /sup 60/Co, occurred; rats implanted with dosimeters were determined to function as environmental radiation monitors. They hypothesized that roof rats on Enjebi survived the nearby nuclear detonation. Analysis of plasma transferrins indicated greater heterozygosity in the northern atoll rat populations. The incidence of oral palatal ridge deformations also was positively correlated with environmental radiation levels, but other gross indications of radiation effect were not found.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *RODENTS -- BIOLOGY; *RODENTS -- RADIONUCLIDE KINETICS
Descriptors: BIOLOGICAL INDICATORS; BIOLOGICAL RADIATION EFFECTS; CESIUM 137; COBALT 60; FOOD CHAINS; POPULATION DENSITY
Broader Terms: ALKALI METAL ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; CESIUM ISOTOPES; COBALT ISOTOPES; ECOLOGY; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MAMMALS ; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIATION EFFECTS; RADIOISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
560162 -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells
INIS Subject Categories: C5210* -- Environmental aspects of siting of nuclear installations
C2120 -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/426 (Item 126 from file: 103)
02200453 ERA-13-045740; EDB-88-143191
Title: Terrestrial environments and ecology of Enewetak Atoll
Author(s): Reese, E.S.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 187-202
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The terrestrial ecosystem of Enewetak Atoll is the result of the dynamic interaction between the biota associated with the small dry

land area and physical parameters of the environment, especially the climate, soil, and ground water. The shrubs and trees, man, birds, rats, and land crabs are among the more conspicuous elements of the terrestrial biota, whereas climatic events, the soils, and the availability of ground water are the most important physical components of the ecosystem.
Major Descriptors: *ENIWETOK -- TERRESTRIAL ECOSYSTEMS
Descriptors: BASELINE ECOLOGY; BIRDS; CLIMATES; CRABS; GROUND WATER; MAN; RATS; SHRUBS; SOILS; TREES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; CRUSTACEANS; DECAPODS; ECOLOGY; ECOSYSTEMS; HYDROGEN COMPOUNDS; INVERTEBRATES; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; PLANTS; PRIMATES; RODENTS; VERTEBRATES; WATER
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)

10/5/427 (Item 127 from file: 103)
02200452 ERA-13-045739; EDB-88-143190
Title: Trophic relationships in Enewetak Atoll
Author(s): Marshall, N.; Gerber, R.P.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Rhode Island, Kingston (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 181-186
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Some of the biologists who were attracted to Enewetak Atoll after the marine research laboratory opened have been studying species that are typical of reef environs and plentiful in this setting. Some have been interested in ecological features, particularly those of the well-developed windward reefs; and some, who have focused on the reef areas as an ecological subsystem, have been interested in the processes of the atoll as a whole. They start by noting three contrasting environments in this large, but typical, atoll. First, there are the coral reefs and knolls, the former almost completely enclosing the atoll, the latter scattered through the lagoon and numbering over 2000. Then there are the open waters of the lagoon. Finally, there is the lagoon benthic environment (other than the coral knolls). In a real sense, and in comparison with the rest, the reefs and knolls are very productive, even though the oceanic waters surrounding the atoll are low in nutrients and organic food sources.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY
Descriptors: BENTHOS; CORALS; ECOSYSTEMS; NUTRIENTS; SITE CHARACTERIZATION
Broader Terms: AQUATIC ORGANISMS; CNIDARIA; ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/428 (Item 128 from file: 103)
02200451 ERA-13-045738; EDB-88-143189
Title: Reef processes: energy and materials flux
Author(s): Marsh, J.A. Jr.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Guam, Mangilao

5003742

Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 159-179
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Publication: United States
Abstract: An overview is presented of the many studies that have been conducted at Eniwetok on reef community processes, making major contributions to an understanding of these processes. These studies have also influenced the context in which many ecologists think about reef systems. Attention is focused on community metabolism, calcification processes at the ecosystem and organismal level, as well as nitrogen and phosphorus cycling. In addition, the role of detritus, coral nutrition, and ecological relationships of reef fishes are discussed.
Major Descriptors: *ENIWETOK -- ECOSYSTEMS; *ENIWETOK -- ENERGY BALANCE
Descriptors: CORALS; DETRITUS; FISHES; MINERAL CYCLING
Broader Terms: ANIMALS; AQUATIC ORGANISMS; CNIDARIA; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520200 -- Environment, Aquatic -- Chemicals Monitoring & Transport -- (-1989)

10/5/429 (Item 129 from file: 103)
02200450 ERA-13-045737; EDB-88-143188
Title: Intertidal ecology of Enewetak Atoll
Author(s): Kohn, A.J.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Washington, Seattle (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 139-157
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The author summarizes the present state of knowledge of the ecology of intertidal environments at Eniwetok. Studies over the past 25 years have documented the major outlines of community organization and have revealed some important, unexpected characteristics. The knowledge these studies have provided of the identity of the major organisms present, their population densities, distribution patterns, temporal variations, habitat requirements, and trophic roles and interactions is evaluated. However, a satisfactory model of intertidal community structure and processes will require more intensive future studies.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY
Descriptors: ANIMALS; ENVIRONMENT; HABITAT; PLANTS; POPULATION DENSITY
Broader Terms: ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource &

520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/430 (Item 130 from file: 103)
02200449 ERA-13-045736; EDB-88-143187
Title: Subtidal environments and ecology of Enewetak Atoll
Author(s): Colin, P.L.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Papua New Guinea, Port Moresby (Indonesia)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 91-138
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: Indonesia
Country of Publication: United States
Abstract: Subtidal environments of Eniwetok are the lagoon and outer reefs and the passage between them which are submerged at low tides. The lagoon and outer reefs are separated, except at passes, by the intertidal reef flat. The outer slope of the atoll is different from the lagoon. The present discussion will include descriptive information on the outer slope to 300 to 400 m depth, but below those depths there is little detailed information concerning the biological communities or geological perspectives.
Major Descriptors: *ENIWETOK -- BASELINE ECOLOGY; *ENIWETOK -- ENVIRONMENT
Descriptors: SITE CHARACTERIZATION
Broader Terms: ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/431 (Item 131 from file: 103)
02200448 ERA-13-045735; EDB-88-143186
Title: Meteorology and atmospheric chemistry of Enewetak Atoll
Author(s): Merrill, J.T.; Duce, R.A.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Rhode Island, Kingston (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 71-90
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The authors discuss the various aspects of the weather of Eniwetok Atoll. The mean and variation for each observed quantity of interest are briefly covered and the authors note their state of knowledge of these factors. In relation to atmospheric chemistry of the atoll, the authors make use of the extensive data collected during experiments there in 1979.
Major Descriptors: *ENIWETOK -- ATMOSPHERIC CHEMISTRY; *ENIWETOK --

5003744

METEOROLOGY
Descriptors: WEATHER
Broader Terms: CHEMISTRY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/432 (Item 132 from file: 103)
02200447 ERA-13-045734; EDB-88-143185
Title: Oceanography of Enewetak Atoll
Author(s): Atkinson, M.J.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Western Australia, Nedlands
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 57-70
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: Australia
Country of Publication: United States
Abstract: The author presents a general oceanography of the northern Marshall Islands and then focuses on the oceanography of Eniwetok Lagoon. Frequent comparisons are made between Eniwetok and Bikini. Windward and leeward cross-reef currents, channel currents, and tidal flow are the major factors influencing the exchange of water between atoll lagoons and the surrounding ocean. Wind-driven circulation contributes primarily to internal circulation. Upwelling of the windward side of lagoons may occur but does not seem to be a generalized feature of deep lagoon circulation. Deep water flow appears to orient itself toward the channels of net water output.
Major Descriptors: *ENIWETOK -- OCEANOGRAPHY
Descriptors: BIKINI; UPWELLING; WATER CURRENTS
Broader Terms: CURRENTS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)
580100 -- Geology & Hydrology -- (-1989)

10/5/433 (Item 133 from file: 103)
02200446 ERA-13-045733; EDB-88-143184
Title: Geology and geohydrology of Enewetak Atoll
Author(s): Ristvet, B.L.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Maxwell Labs., Inc., Albuquerque, NM (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 37-56
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States

Country of Publication: United States
Abstract: Data are summarized on the geological aspects of Eniwetok gathered over the last 40 years. The history of investigations may be divided into three periods: pre-1946, 1946-1964 and post-1964. The first period was one of discovery and initial exploration, focusing on surficial geologic features. Beginning in 1946, there was a significant increase in knowledge of atolls resulting from a series of comprehensive scientific studies which established baselines to assess effects from nuclear weapons testing conducted at Eniwetok between 1946 and 1958. From 1964 to the present, scientific studies have been of two types: those which have continued to address the problems conceptualized by earlier studies and those which have addressed the effects of the nuclear weapons testing. Studies of the hydrology of Eniwetok were initiated in 1972 to evaluate possible environmental effects of the proposed PACE high explosive craters on the ground-water resources of the islands.
Major Descriptors: *ENIWETOK -- GEOLOGY; *ENIWETOK -- HYDROLOGY; *NUCLEAR WEAPONS -- TESTING
Descriptors: BASELINE ECOLOGY; HISTORICAL ASPECTS
Broader Terms: ECOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)
580100 -- Geology & Hydrology -- (-1989)

10/5/434 (Item 134 from file: 103)
02200445 ERA-13-045732; EDB-88-143183
Title: Physiography of Enewetak Atoll
Author(s): Colin, P.L.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Papua New Guinea, Port Moresby (Indonesia)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 27-35
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: Indonesia
Country of Publication: United States
Abstract: The author discusses the location, size, weather and climate of Eniwetok. The environment is also described, focusing on the lagoon, the reef flat, the seaward slope and the islands at Eniwetok. Man-made features that are evaluated include quarries which were excavated for building or road construction. A number of craters which remain from nuclear weapons testing are discussed.
Major Descriptors: *ENIWETOK -- CLIMATES; *ENIWETOK -- ENVIRONMENT; *ENIWETOK -- GEOGRAPHY; *NUCLEAR WEAPONS -- TESTING
Descriptors: HYDROLOGY
Broader Terms: ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/435 (Item 135 from file: 103)
02200444 ERA-13-045731; EDB-88-143182
Title: History of the people of Enewetak Atoll
Author(s): Kiste, R.C.; Devaney, D.M.; Reese, E.S.; Burch, B.L.;

5003746

Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Honolulu (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 17-25
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: This chapter focuses upon the people of Enewetak. It examines their history, the structure of their culture and society, the ways they have coped with the colonial powers that governed the islands, and their response to their resettlement on Ujilang Atoll. Some mention is necessarily made of the Bikini community because the histories of the two peoples are intertwined.
Major Descriptors: *ENIWETOK -- HUMAN POPULATIONS; *HUMAN POPULATIONS -- HISTORICAL ASPECTS
Descriptors: BIKINI
Broader Terms: ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/436 (Item 136 from file: 103)
02200443 ERA-13-045730; EDB-88-143181
Title: Research at Enewetak Atoll: a historical perspective
Author(s): Helfrich, P.; Ray, R.; Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Affiliation: Univ. of Hawaii, Kaneoke (USA)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 1-16
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8808
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Between 1946 and 1958, 43 nuclear devices were tested at Eniwetok. This testing program provided an opportunity for research which eventually led to the establishment of the Eniwetok Marine Biological Laboratory in 1954. From 1954 to 1974 research was broadly aimed at increasing their knowledge of this diverse coral atoll ecosystem. The second period of research began with the reorganization of the laboratory in 1974. The major projects of the 1975-1980 period were (1) a study of the circulation of the Eniwetok Lagoon, (2) research on the dynamics of ground water resources of Eniwetok Atoll, and (3) studies of diguatera fish poisoning at Eniwetok.
Major Descriptors: *CORALS -- RESEARCH PROGRAMS; *ENIWETOK -- RESEARCH PROGRAMS; *NUCLEAR WEAPONS -- TESTING
Descriptors: ECOSYSTEMS; HISTORICAL ASPECTS; SITE CHARACTERIZATION
Broader Terms: CNIDARIA; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA;

520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/437 (Item 137 from file: 103)
02163291 NOV-88-010034; EDB-88-106024
Author(s): Hacker, B.C.
Title: The dragon's tail: Radiation safety in the Manhattan Project
Publisher: Univ. of California Press,Los Angeles, CA
Publication Date: 1987 p 258
Document Type: Book
Language: English
Journal Announcement: EDB8806
Availability: Univ. of California, 2130 Berkeley Way, Berkeley, CA 94720.
Subfile: NOV (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The book's contents are: Introduction: radiation safety in World War II. Foundations of Manhattan Project radiation safety. Role of the Chicago Health Division. Radiation safety at Los Alamos, Trinity. From Japan to Bikini. Crossroads. Epilogue: continuity and change in radiation safety. Appendix: chronological index of radiation exposure standards. Index. The United States Department of Energy and the Energy Research and Development Administration financially supported this book which provides a historical account of radiological safety in nuclear weapons testing during World War II. The author relied on archival sources and the oral testimony of participants and eyewitnesses. He provides a bibliography with full citations.
Major Descriptors: *NUCLEAR WEAPONS -- RADIATION HAZARDS; *NUCLEAR WEAPONS -- SAFEGUARD REGULATIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: MANHATTAN PROJECT; RADIATION PROTECTION; US DOE
Broader Terms: HAZARDS; HEALTH HAZARDS; NATIONAL ORGANIZATIONS; REGULATIONS ; US ORGANIZATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/438 (Item 138 from file: 103)
02151859 INS-88-017960; NTS-88-014484; ERA-13-031263; EDB-88-094591
Author(s): Robison, W.L.; Conrado, C.L.; Phillips, W.A.
Title: Enjebi Island dose assessment
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Jul 1987 p 56
Report Number(s): UCRL-53805
Order Number: DE88006759
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: We have updeated the radiological dose assessment for Enjebi Island at Enewetak Atoll using data derived from analysis of food crops grown on Enjebi. This is a much more precise assessment of potential doses to people resettling Enjebi Island than the 1980 assessment in which there were no data available from food crops on Enjebi. Details of the methods and data used to evaluate each exposure pathway are presented. The terrestrial food chain is the most significant potential exposure pathway and /sup 137/Cs is the radionuclide responsible for most of the estimated dose over the next 50 y. The doses are calculated assuming a resettlement date of 1990. The average wholebody maximum annual estimated dose equivalent derived using our diet model is 166 mremy;the effective dose equivalent is 169 mremy. The estimated 30-,

slightly higher than the whole-body estimates in each case. The bone-surface cells (endosteal cells) receive the highest dose, but they are a less sensitive cell population and are less sensitive to fatal cancer induction than whole body and bone marrow. The effective dose equivalents for 30, 50, and 70 y are 3.6 rem, 5.3 rem, and 6.6 rem, respectively. 79 refs., 17 figs., 24 tabs
Major Descriptors: *CARCINOGENESIS -- RISK ASSESSMENT; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *DOSE EQUIVALENTS -- FORECASTING; *HUMAN POPULATIONS -- DOSE EQUIVALENTS
Descriptors: BONE MARROW; CROPS; ENIWETOK; ENVIRONMENTAL EXPOSURE PATHWAY; INGESTION; RADIOINDUCTION; REMEDIAL ACTION; WHOLE-BODY IRRADIATION
Broader Terms: ALKALI METAL ISOTOPES; ANIMAL TISSUES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; CESIUM ISOTOPES; ECOLOGICAL CONCENTRATION; EXTERNAL IRRADIATION; HEMATOPOIETIC SYSTEM; INTAKE; IRRADIATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ORGANS; PATHOGENESIS; POPULATIONS; RADIOISOTOPES; TISSUES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560151 -- Radiation Effects on Animals -- Man
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man
C1500 -- Effects of External Radiation on Man

10/5/439 (Item 139 from file: 103)
02150429 ERA-13-031142; EDB-88-093161
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Jokela, T.A.; Brunk, J.A.
Title: Radionuclide concentrations in fish and invertebrates from Bikini Atoll
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Jan 1988 p 55
Report Number(s): UCRL-53846
Order Number: DE88009031
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: As in other global studies, /sub 137/Cs was found in the highest concentrations in edible flesh of all species of fish and in the lowest concentrations in the bone or liver. The mean concentration of /sup 137/Cs in muscle of reef fish from the southern part of the atoll is comparable to the global-fallout concentration measured in market samples of fish collected from Chicago, IL, USA, in 1982. Strontium-90 is associated generally with non-edible parts of fish, such as bone or viscera. Twenty-five to fifty percent of the total body burden of /sub 60/Co is accumulated in the muscle tissue; the remainder is distributed among the liver, skin, and viscera. The mean concentration of /sub 60/Co in fish has been decreasing at a rate faster than radiological decay alone. Most striking is the range of /sup 207/Bi concentrations among different species of fish collected at the same time and place. Highest concentrations of /sup 207/Bi were consistently detected in the muscle and other tissues of goatfish and some of the pelagic lagoon fish. In other reef fish, such as mullet, surgeonfish, and parrotfish, /sub 207/Bi was usually below detection limits by gamma spectrometry. Over 70% of the whole-body activity of /sup 207/Bi in goatfish is associated with the muscle tissue, whereas less than 5% is found in the muscle of mullet and surgeonfish. Neither /sup 239 +240/Pu nor /sup 241/Am is accumulated significantly in the muscle tissue of any species of fish. Apparently, /sup 238/Pu is in a more readily available form

through the fish-food ingestion pathway are well below current Federal guidelines. 24 refs., 1 fig., 27 tabs
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *BISMUTH 207 -- RADIOECOLOGICAL CONCENTRATION; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *COBALT 60 -- RADIOECOLOGICAL CONCENTRATION; *FISHES; *PLUTONIUM 238 -- RADIOECOLOGICAL CONCENTRATION ; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: BIKINI; BIOLOGICAL ACCUMULATION; COMPILED DATA; RADIOACTIVITY; RADIONUCLIDE KINETICS; TISSUE DISTRIBUTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DISTRIBUTION; ECOLOGICAL CONCENTRATION ; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
560162 -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells
290300 -- Energy Planning & Policy -- Environment, Health, & Safety
290400 -- Energy Planning & Policy -- Energy Resources
INIS Subject Categories: B3200* -- Water
C2120 -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/440 (Item 140 from file: 103)
02144349 EDB-88-087080
Title: Strontium-isotope stratigraphy of Enewetak Atoll
Author(s): Ludwig, K.R.; Halley, R.B.; Simmons, K.R.; Peterman, Z.E.
Affiliation: Geological Survey, Denver, CO (USA)
Source: Geology (United States) v 16:2. Coden: GLGYB
Publication Date: Feb 1988 p 173-177
Document Type: Journal Article
Language: English
Journal Announcement: EDB8805
Subfile: JMT (DOE contractor)
Country of Origin: United States
Abstract: /sup 87/Sr//sup 86/Sr ratios determined for samples from a 350 m core of Neogene lagoonal, shallow-water limestones from Enewetak Atoll display a remarkably informative trend. Like the recently published data for Deep Sea Drilling Project (DSDP) carbonates, /sup 87/Sr//sup 86/Sr at Enewetak increases monotonically but not smoothly from the early Miocene to the Pleistocene. The data show intervals of little or no change in /sup 87/Sr//sup 86/Sr, punctuated by sharp transitions to lower values toward greater core depths. The sharp transitions correlate with observed solution disconformities caused by periods of subaerial erosion, whereas the intervals of little or no change in /sup 87/Sr//sup 86/Sr correspond to intervals of rapid accumulation of shallow-water carbonate sediments. When converted to numerical ages using the published DSDP 590B trend, the best-resolved time breaks are at 282 m (12.3 to 18.2 Ma missing) and 121.6 m (3.0 to 5.3 Ma missing) below the lagoon floor. At Enewetak, Sr isotopes offer a stratigraphic resolution for these shallow-marine Neogene carbonates comparable to that of nannofossil zonation in deep-sea carbonates (0.3-3 m.y.). In addition, the correlation of times of Sr-isotope breaks at Enewetak with times of rapid Sr-isotope change in the DSDP 590B samples confirms

is rapid.
Major Descriptors: *ENIWETOK -- GEOLOGIC DEPOSITS; *GEOLOGIC DEPOSITS -- STRATIGRAPHY
Descriptors: AGE ESTIMATION; CARBONATE ROCKS; CORRELATIONS; GEOLOGIC STRATA ; ISOTOPE DATING; ISOTOPE RATIO; LIMESTONE; PACIFIC OCEAN; SEA LEVEL; STRONTIUM 86; STRONTIUM 87
Broader Terms: AGE ESTIMATION; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; CARBONATE ROCKS; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; GEOLOGIC STRUCTURES; GEOLOGY; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LEVELS; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; RADIOISOTOPES; ROCKS; SEAS; SEDIMENTARY ROCKS; STABLE ISOTOPES; STRONTIUM ISOTOPES; SURFACE WATERS
Subject Categories: 580100* -- Geology & Hydrology -- (-1989)

10/5/441 (Item 141 from file: 103)
02138231 AIX-19-040680; EDB-88-080961
Title: Late effects of low-dose ionizing radiation on man
Author(s): Brilliant, M.D.; Vorob'ev, A.I.; Gogin, E.E.
Source: Ter. Arkh. (USSR) v 59:6. Coden: TEARA
Publication Date: 1987 p 3-8
Document Type: Journal Article
Language: Russian
Journal Announcement: EDB8804
Subfile: INIS (non-US Atomindex input AIX)
Country of Origin: USSR
Abstract: One of the most important problems, being stated before the medicine by the accident, which took place in Chernobyl in 1986- the problem of the so-called ionizing radiation low dose effect on a man's organism, is considered because a lot of people were subjected to low dose action. The concept of low doses of radiaion action and specificity of its immediate action in comparison with high dose action is considered. One of the most important poit while studying low dose action is the necessity to develop a system including all irradiated people and dosimetry, and espicially to study frequencies and periods of tumor appearance in different irradiated tissues. The results obtained when examining people who survived the atomic explosion in Japan and on the Marshall islands are analyzed. They testify to the fact that radiation affets more tissues than the clinical picture about the acute radiation sickness tells, and that tumors developing in them many years after radiation action tell about radiosensitivity in some tissues.
Major Descriptors: *LOW DOSE IRRADIATION -- DELAYED RADIATION EFFECTS
Descriptors: CARCINOGENESIS; CHERNOBYLSK-4 REACTOR; IONIZING RADIATIONS; MAN; REACTOR ACCIDENTS; RESEARCH PROGRAMS
Broader Terms: ACCIDENTS; ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; ENRICHED URANIUM REACTORS; GRAPHITE MODERATED REACTORS; IRRADIATION; LWGR TYPE REACTORS; MAMMALS; PATHOGENESIS; POWER REACTORS; PRIMATES; RADIATION EFFECTS; RADIATIONS; REACTORS; THERMAL REACTORS; VERTEBRATES; WATER COOLED REACTORS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man

10/5/442 (Item 142 from file: 103)
02125509 EDB-88-068236
Author(s): Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Title: The natural history of Enewetak Atoll: Volume 2, Biogeography and systematics
Corporate Source: Hawaii Univ., Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 346
Report Number(s): DOE/EV/00703-T1-Vol.2
Order Number: DE87006111
Contract Number (DOE): AC08-76EV00703

Document Type: Report
Language: English
Journal Announcement: ERA8804
Availability: NTIS, PC A15/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: The two volumes of The Natural History of Enewetak Atoll summarize research done at the Mid-Pacific Research Laboratory from 1954 to 1984 under the auspices of the Department of Energy. Volume 2 of The Natural History of Enewetak Atoll provides information on the taxonomy of animals and plants known to occur at Enewetak Atoll. The collections on which the checklists in each chapter are based are housed at the Bernice P. Bishop Museum in Honolulu and the US National Museum of Natural History, Smithsonian Institution, Washington, DC. In addition to the species checklists, each chapter in Volume 2 provides a succinct summary of the biota with respect to endemism, range extensions, and other features that set the Enewetak biota apart from those one might expect to find on equivalent Indo-Pacific islands. This compendium of taxonomic information for an atoll should prove of immense value to scientists interested in biogeography and evolutionary biology of island ecosystems for years to come. Individual chapters are processed separately for the data base.
Major Descriptors: *ENIWETOK -- SITE CHARACTERIZATION; *NUCLEAR WEAPONS -- TESTING
Descriptors: ALGAE; ARTHROPODS; BIRDS; COPEPODS; CORALS; CRUSTACEANS; ECHINODERMS; FISHES; FUNGI; LEADING ABSTRACT; MAMMALS; MOLLUSCS; NEMATODES; PLANKTON; PLANTS; PLATYHELMINTHS; REPTILES; TAXONOMY
Broader Terms: ABSTRACTS; ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; ASCHELMINTHES; BIOLOGY; CNIDARIA; CRUSTACEANS; DOCUMENT TYPES; HELMINTHS; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PLANTS; VERTEBRATES; WEAPONS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/443 (Item 143 from file: 103)
02125508 EDB-88-068235
Author(s): Devaney, D.M.; Reese, E.S.; Burch, B.L.; Helfrich, P. (eds.)
Title: The natural history of Enewetak Atoll: Volume 1, The ecosystem: Environments, biotas, and processes
Corporate Source: Hawaii Univ., Honolulu (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Publication Date: 1987 p 237
Report Number(s): DOE/EV/00703-T1-Vol.1
Order Number: DE87006110
Contract Number (DOE): AC08-76EV00703
Note: Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report
Language: English
Journal Announcement: ERA8804
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: The two volumes of The Natural History of Enewetak Atoll summarize research done at the Mid-Pacific Research Laboratory from 1954 to 1984 under the auspices of the Department of Energy. The history of the laboratory and the reasons for its support by the United States Department of Energy are described in Chapter 1 of Volume 1.

e.g., those on geology, subtidal and intertidal environments and ecology, and those on reef processes and trophic relationships, summarize a great diversity of research carried out by many scientists for many years. In contrast, the chapters on meteorology and oceanography summarize research carried out under one integrated program involving fewer scientists working over a shorter period. Individual chapters are processed separately for the data base.
Major Descriptors: *CORALS -- BASELINE ECOLOGY; *ENIWETOK -- SITE CHARACTERIZATION; *NUCLEAR WEAPONS -- TESTING
Descriptors: ATMOSPHERIC CHEMISTRY; BIRDS; GEOLOGY; HISTORICAL ASPECTS; HYDROLOGY; LEADING ABSTRACT; METEOROLOGY; RESEARCH PROGRAMS; RODENTS; TERRESTRIAL ECOSYSTEMS
Broader Terms: ABSTRACTS; ANIMALS; CHEMISTRY; CNIDARIA; DOCUMENT TYPES; ECOLOGY; ECOSYSTEMS; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES; WEAPONS
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/444 (Item 144 from file: 103)
02122997 EDB-88-065724
Title: Harnessing the power of the waves
Source: Environment (United States) v 29:3. Coden: ENVTA
Publication Date: Apr 1987 p 21
Document Type: Journal Article
Language: English
Journal Announcement: EDB8804
Subfile: JMT (DOE contractor)
Country of Origin: United States
Abstract: Norway and several other countries have harnessed the enormous energy of the ocean and used it to produce electric energy. Norway's first wave-power station is at Tostestallen and has two types of wave-energy power plants. The first is an oscillating column generator which uses the force of the waves to push air up a 65 foot tower and through a turbine which drives a generator. As the wave recedes, the air is sucked back through the turbine, which runs continuously. The second power plant uses wave water that spills over a dam into a reservoir and rushes through turbines as it flows back to the sea. Norwegian engineers are also experimenting with ways to focus waves by creating a lens shaped reef. Ocean wave power technology could be useful to isolated places which have no other source of electric power, like the Marshall Islands of the Pacific.
Major Descriptors: *NORWAY -- TIDAL POWER PLANTS; *NORWAY -- WAVE ENERGY CONVERTERS
Descriptors: ELECTRIC POWER; SEAS
Broader Terms: EUROPE; POWER; POWER PLANTS; SCANDINAVIA; SURFACE WATERS; WESTERN EUROPE
Subject Categories: 160701* -- Tidal Power Plants -- Design & Operation

10/5/445 (Item 145 from file: 103)
02117752 DEN-88-001622; EDB-88-060478
Title: Transuranium nuclides in the environment
Author(s): Sakanoue, Masanobu
Affiliation: Kanazawa Univ., Japan. Low Level Radioactivity Lab.
Source: Radiochim. Acta (Germany, Federal Republic of) v 42:3. Coden: RAACA
Publication Date: 1987 p 103-112
Document Type: Journal Article
Language: English
Journal Announcement: EDB8803
Subfile: DEN (Federal Republic of Germany (sent to DOE from))
Country of Origin: Germany, Federal Republic of
Abstract: Many countries are presently concerned with problems relating to

and behaviour of transuranium elements in the environment studied at Kanazawa University in Japan is presented. About 17 years ago, a high degree of accumulation of /sup 239/Pu in the surface soil of Nagasaki was found in the Nishiyama area, where 'black rain' occured just after the nuclear bomb explosion. The introduction of newly developed radiochemical methods and instrumentation has enabled studies to be carried out on environmental plutonium isotopes, americium-241 and more recently neptunium-237 with respect to distribution depth profile, variation with time and relationship with organic materials. Valuable information has been obtained on the basis of samples collected from various locations in Japan, including surface soil, sea and lake sediments, atmospheric aerosol, water from the Japan Sea and the Pacific Ocean, and from material related with the 'Bikini Event' of 1954.

Major Descriptors: *AMERICIUM 241 -- ENVIRONMENT; *AMERICIUM 241 -- FALLOUT ; *JAPAN -- FALLOUT; *NEPTUNIUM 237 -- ENVIRONMENT; *NEPTUNIUM 237 -- FALLOUT; *PLUTONIUM 239 -- ENVIRONMENT; *PLUTONIUM 239 -- FALLOUT; *PLUTONIUM 239 -- ISOTOPE RATIO; *PLUTONIUM 240 -- ENVIRONMENT; *PLUTONIUM 240 -- FALLOUT; *PLUTONIUM 240 -- ISOTOPE RATIO; *SEAWATER -- PLUTONIUM 239; *SEAWATER -- PLUTONIUM 240

Descriptors: CESIUM 137; DEPTH; ION EXCHANGE; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; QUANTITATIVE CHEMICAL ANALYSIS; RADIOCHEMISTRY; SEDIMENTS; SOILS ; SOLVENT EXTRACTION; SURFACE WATERS

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ASIA; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHEMICAL ANALYSIS; CHEMISTRY; DIMENSIONS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; EXTRACTION; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISOTOPES; NEPTUNIUM ISOTOPES; NUCLEI; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS ; PLUTONIUM ISOTOPES; RADIOISOTOPES; SEAS; SEPARATION PROCESSES; SURFACE WATERS; WATER; YEARS LIVING RADIOISOTOPES

Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)

10/5/446 (Item 146 from file: 103)
02114835 NOV-87-082476; EDB-88-057561
Title: Cobalt-rich manganese crust potential of the U.S. Trust and Affiliated Territories
Author(s): Clark, A.L.; Johnson, C.J.
Affiliation: East-West Center
Title: Eighteenth annual offshore technology conference. Volume 3
Conference Title: Offshore technology conference and exhibition
Conference Location: Richardson, TX, USA Conference Date: 5 May 1986
Publisher: Offshore Technology Conference,Richardson, TX
Publication Date: 1986 p 111-118
Report Number(s): CONF-860552-
Note: Technical Paper OTC 5233
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EPA8712
Subfile: EPA (Energy Abstracts for Policy Analysis). NOV (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Cobalt-rich manganese crusts are known to occur in potentially economic concentration within the EEZ areas of several Trust and Affiliated Territories and are inferred to occur in many others. A resource assessment of the potential of cobalt-rich manganese crusts was completed and based on the analysis, the following is a ranking of the U.S. Trust and Affiliated Territories, in decreasing order in terms of potential for economically viable concentration of cobalt crusts: Federated States of Micronesia, Marshall Islands, Commonwealth of

Major Descriptors: *COBALT -- RESOURCE ASSESSMENT; *GUAM -- MINERAL RESOURCES; *MANGANESE -- RESOURCE ASSESSMENT; *MARIANA ISLANDS -- MINERAL RESOURCES
Descriptors: AVAILABILITY; ECONOMICS; FORECASTING; OCEANIC CRUST
Broader Terms: EARTH CRUST; ELEMENTS; ISLANDS; MARIANA ISLANDS; METALS; NORTH AMERICA; RESOURCES; TRANSITION ELEMENTS; TRUST TERRITORY OF THE PACIFIC ISLANDS; USA
Subject Categories: 290400* -- Energy Planning & Policy -- Energy Resources

10/5/447 (Item 147 from file: 103)
02095224 NOV-88-088392; EDB-88-037947
Title: Bikini revisited
Author(s): Kohn, H.I.
Affiliation: Bikini Atoll Rehabilitation Committee, 1203 Shattuck Ave., Berkeley, CA 94709
Title: Thirty-third annual meeting of the Radiation Research Society (Abstracts)
Conference Title: 33. annual scientific meeting of the Radiation Research Society
Conference Location: Los Angeles, CA, USA Conference Date: 5 May 1985
Publisher: Radiation Research Society,Philadelphia, PA
Publication Date: 1985 p 109
Report Number(s): CONF-8505113-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8801
Subfile: INS (US Atomindex input). NOV (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: In 1946 the U.S. Government removed the inhabitants of Bikini Atoll in the Marshall Islands so that a 22-year weapons-testing program could be carried out. The tests contaminated to varying degrees the soil of the Atoll's 30 islands (total area, 7.4 sq km). At the request of Congress, the Bikini Atoll Rehabilitation Committee has reported on the Atoll's present status. All islands may be visited now, but some may not be settled owing to the risk of eating food (especially coconut) that is contaminated with cesium-137 and strontium-90. Fish meat is not a problem. Spontaneous decay will decontaminate the ''food risk'' areas within 80 years or so. A direct solution to the problem would be topsoil removal. High-potassium fertilizer may diminish cesium uptake by plants. The feasibility and cost of such methods will be described. At the time of emigration (1946), the Bikinians numbered 167; today (1984) there are more than 1100 (probably, half under age 16 years). Planning for resettlement will involve particular attention to water supply (a problem in the Marshalls) and to the limitations of local food production at Bikini Atoll.
Major Descriptors: *BIKINI -- EVALUATION; *BIKINI -- GOVERNMENT POLICIES; *BIKINI -- LAND POLLUTION; *BIKINI -- RISK ASSESSMENT; *BIKINI -- WATER POLLUTION; *BIKINI -- WATER QUALITY; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *PLANTS -- BIODEGRADATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: COCONUTS; CONTAMINATION; COST OVERRUNS; PLANNING; SURFACE CONTAMINATION; UPTAKE
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHEMICAL REACTIONS; CONTAMINATION; COST; DECOMPOSITION; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL QUALITY; EVEN-EVEN NUCLEI; FOOD; FRUITS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POLLUTION; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 290300* -- Energy Planning & Policy -- Environment, Health, & Safety
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring

Transport -- (1989)
520600 -- Environment, Aquatic -- Regulations -- (-1989)
290400 -- Energy Planning & Policy -- Energy Resources
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
B3200 -- Water
F2300 -- Nuclear Law -- Radiation Health

10/5/448 (Item 148 from file: 103)
02077371 GRA-88-10285; EDB-88-020092
Title: Operation Crossroads. Gross damage report--Test Able
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 28 Jan 1987 p 89
Report Number(s): AD-A-995501/4/XAB; XRD-213(EX)
Note: Extracted version of report dated 6 Jul 1946
Document Type: Report
Language: English
Journal Announcement: ERA8801
Availability: NTIS, PC A05/MF A01.
Subfile: ERA*(Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *CROSSROADS PROJECT -- MILITARY EQUIPMENT; *MILITARY EQUIPMENT -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- CROSSROADS PROJECT
Descriptors: ANIMALS; INSPECTION
Broader Terms: EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/449 (Item 149 from file: 103)
02077370 gra-88-10284; EDB-88-020091
Author(s): Oleson, M.H.
Title: Operation Ivy, Pacific Proving Ground, November 1952. Project 7.1. Electromagnetic effects from nuclear explosions. Report to the scientific director
Corporate Source: Joint Task Force 132, Washington, DC (USA)
Publication Date: 31 Jan 1958 p 35
Report Number(s): AD-A-995500/6/XAB
Document Type: Report
Language: English
Journal Announcement: ERA8801
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *IVY PROJECT -- ELECTROMAGNETIC PULSES; *NUCLEAR EXPLOSIONS -- IVY PROJECT
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; PULSES; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/450 (Item 150 from file: 103)
02069500 NOV-87-082477; EDB-88-012220
Title: Cobalt-rich ferromanganese crusts from the central Pacific
Author(s): Hein, J.R.; Manheim, F.T.; Schwab, W.C.
Affiliation: USGS
Title: Eighteenth annual offshore technology conference. Volume 3
Conference Title: Offshore technology conference and exhibition
Conference Location: Richardson, TX, USA Conference Date: 5 May 1986
Publisher: Offshore Technology Conference,Richardson, TX
Publication Date: 1986 p 119-126

Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8712
Subfile: NOV (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Ferromanganese crusts coat most hard substrates on seamounts, ridges, and plateaus in the central-Pacific basin. Crusts from less than 2500 m water depth are rich in Mn, Co, Ni, Pb, and Pt. Samples collected from the EEZ of the Hawaiian, Johnston, Palmyra, and Marshall Islands are discussed. Necker Ridge in the Hawaiian EEZ has the greatest average crust thickness of 4 cm. The dominant mineral in all crusts is delta-MnO/sub 2/. Substrate rocks are dominantly volcanic breccia. Slumping and turbidity currents on the flanks of the submarine edifices partly control crust thickness by burial and dissolution or erosion. Regional variations in crust chemistry and mineralogy can be realted to various oceanograhic and geologic conditions. Of the areas examined in some detail, the EEZ of Johnston, Palmyra, and the Marshall Islands hold the greatest economic potential.
Major Descriptors: *COBALT -- RESOURCE ASSESSMENT; *IRON ORES -- RESOURCE ASSESSMENT; *MANGANESE OXIDES -- RESOURCE ASSESSMENT; *PACIFIC OCEAN -- MINERAL RESOURCES
Descriptors: DEPTH; DISSOLUTION; ECONOMICS; EROSION; GEOCHEMISTRY; GEOGRAPHICAL VARIATIONS; HAWAII; LEAD; MANGANESE; MARSHALL ISLANDS; MINERALOGY; NICKEL; OCEANIC CRUST; PLATINUM; SEA BED; SUBSTRATES; TOPOGRAPHY; TURBIDITY; VOLCANIC ROCKS; WATER CURRENTS
Broader Terms: CHALCOGENIDES; CHEMISTRY; CURRENTS; DIMENSIONS; EARTH CRUST; ELEMENTS; FEDERAL REGION IX; IGNEOUS ROCKS; ISLANDS; MANGANESE COMPOUNDS; METALS; MICRONESIA; NORTH AMERICA; OCEANIA; ORES; OXIDES; OXYGEN COMPOUNDS; PLATINUM METALS; RESOURCES; ROCKS; SEAS; SURFACE WATERS; TRANSITION ELEMENT COMPOUNDS; TRANSITION ELEMENTS; USA; VARIATIONS
Subject Categories: 580500* -- Oceanography -- (1980-1989)

10/5/451 (Item 151 from file: 103)
02054071 ERA-13-004518; EDB-87-182030
Title: Comparative concentrations of /sup 137/Cs, /sup 90/Sr, /sup 239,240/Pu, and /sup 241/Am in tissues of fish from the Marshall Islands and calculated dose commitments from their consumption
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Robison, W.L.; Pinder, J.E. III; Alberts, J.J.; McLeod, K.W.; Schreskhise, R.G. (eds.)
Affiliation: Lawrence Livermore National Lab., CA
Title: Environmental research on actinide elements
Corporate Source: Savannah River Ecology Lab., Aiken, SC (USA) Georgia Univ., Sapelo Island (USA). Marine Inst. Pacific Northwest Lab., Richland, WA (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Conference Title: Symposium on environmental research for actinide elements
Conference Location: Hilton Head Island, SC, USA Conference Date: 7 Nov 1984
Publication Date: Aug 1987 p 391-427
Report Number(s): CONF-841142-
Order Number: DE86008713
Document Type: Analytic of a Report; Conference literature; Numerical data
Language: English
Journal Announcement: INS8712
Availability: NTIS, PC A19/MF A01; 1.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: Body burdens of /sup 90/Sr, /sup 137/Cs, and the transuranics in bottom-feeding fish from Marshall Island atolls are derived, in part,

species of fish are characterized by relating tissue concentrations to those in filtered seawater. For bottom-feeding fish, the values are lower at the lesser contaminated atolls than those values determined for the same species at the more contaminated atolls. These fish have the ability to lower their gut pH during feeding. When this occurs, there is a dissolution of a fraction of the ingested calcium carbonate containing radionuclides that were fixed or fused internally to the material during nuclear testing. Fractions of the radionuclides released during solution in carbonate matrix are available for passage across the gut wall. Amounts released to solution in the gut are proportional to the levels of contamination at the different atolls. Concentration factors for higher trophic level species, which do not rely on sediments or coral for their source of food, show no such trends between differentially contaminated atolls. A two-source model used to compute the internal concentrations is described. Americium-241 seems to be more biologically available than /sup 239,240/Pu to higher trophic level species from the lagoons, whereas at lower trophic levels the opposite seems to be the case. Cesium-137 is now the largest contributor of the small radiological dose to man from the marine fish pathway, with the transuranics contributing from 2 to 30% of the total dose. 22 references, 1 figure, 19 tables.

Major Descriptors: *AMERICIUM 241 -- BODY BURDEN; *CESIUM 137 -- BODY BURDEN; *FISHES -- RADIONUCLIDE KINETICS; *PLUTONIUM 239 -- BODY BURDEN ; *PLUTONIUM 240 -- BODY BURDEN; *STRONTIUM 90 -- BODY BURDEN

Descriptors: BIOLOGICAL AVAILABILITY; COMPARATIVE EVALUATIONS; EXPERIMENTAL DATA; GENETIC VARIABILITY; MARSHALL ISLANDS; MATHEMATICAL MODELS

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL VARIABILITY; CESIUM ISOTOPES; DATA; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES

Subject Categories: 560162* -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells

INIS Subject Categories: C2120* -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/452 (Item 152 from file: 103)

02052574 ERA-13-004390; EDB-87-180533

Author(s): Shingleton, K.L.; Cate, J.L.; Trent, M.G.; Robison, W.L.

Title: Bikini Atoll ionizing radiation survey, May 1985-May 1986

Corporate Source: Lawrence Livermore National Lab., CA (USA)

Publication Date: 1 Oct 1987 p 85

Report Number(s): UCRL-53798

Order Number: DE88001322

Contract Number (DOE): W-7405-ENG-48

Document Type: Report

Language: English

Journal Announcement: NTS8712

Availability: NTIS, PC A05/MF A01.

Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts). TIC (Technical Information Center)

Country of Origin: United States

Country of Publication: United States

Abstract: Between 1946 and 1958, the United States conducted 23 nuclear tests at the Bikini Atoll in the Marshall Islands, which resulted in extensive radioactive contamination of a number of islands in the atoll and prevented the timely resettlement of the native population. Although the external dose rates from beta and gamma radiation have been previously determined by aerial survey and a variety of ground measurement techniques, technical constraints limited the assessment of external beta dose rates that result from the /sup 137/Cs and /sup

the external beta dose rates can be measured. 18 refs., 7 figs., 5 tabs.
Major Descriptors: *BIKINI -- RADIOMETRIC SURVEYS
Descriptors: BETA DECAY RADIOISOTOPES; BETA SPECTROMETERS; GAMMA RADIATION; SITE CHARACTERIZATION; THERMOLUMINESCENT DOSEMETERS
Broader Terms: DOSEMETERS; ELECTROMAGNETIC RADIATION; GEOPHYSICAL SURVEYS; IONIZING RADIATIONS; ISLANDS; ISOTOPES; LUMINESCENT DOSEMETERS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; OCEANIA; RADIATIONS; RADIOISOTOPES; SPECTROMETERS; SURVEYS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/453 (Item 153 from file: 103)
02052465 ERA-13-004323; EDB-87-180424
Title: Transuranic resuspension
Author(s): Sehmel, G.A.; Pinder, J.E. III; Alberts, J.J.; McLeod, K.W.; Schreskhise, R.G. (eds.)
Title: Environmental research on actinide elements
Corporate Source: Savannah River Ecology Lab., Aiken, SC (USA) Georgia Univ., Sapelo Island (USA). Marine Inst. Pacific Northwest Lab., Richland, WA (USA) USDOE Office of Scientific and Technical Information, Oak Ridge, TN
Conference Title: Symposium on environmental research for actinide elements
Conference Location: Hilton Head Island, SC, USA Conference Date: 7 Nov 1984
Publication Date: Aug 1987 p 157-192
Report Number(s): CONF-841142-
Order Number: DE86008713
Document Type: Analytic of a Report; Conference literature; Numerical data
Language: English
Journal Announcement: INS8712
Availability: NTIS, PC A19/MF A01; 1.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this chapter is to summarize plutonium and americium resuspension research conducted by the Pacific Northwest Laboratory from 1977 to 1983. Airborne plutonium was determined at five sites in the Hanford area, and both plutonium and americium were determined at two sites. Concentrations of airborne plutonium and americium were examined as a function of aerodynamic particle diameter, sampling height, wind speed increments, and wind direction increments. The following results are discussed: airborne radionuclide concentrations, /sup +/Ci/cm/sup 3/ of sampled air; radionuclide activity densities, ..mu..Ci/g of airborne solids; airborne plutonium fluxes, ..mu..Ci/(m/sup 2/d); /sup 241/Am//sup 239,240/Pu activity ratios, (..mu..Ci /sup 241/Am)/(..mu..Ci /sup 239,240/Pu); and airborne solid concentrations, ..mu.. g/m/sup 3/ of sampled air. In addition, a relationship based on field data for aged plutonium sources at Bikini Atoll, the Hanford site, and Rocky Flats was developed to estimate the maximum expected plutonium activity density on airborne solids compared to activity densities for bulk surface-soil samples. As a result, it is possible to more accurately predict resuspension factor ranges as a function of the resuspension source activity densities. 31 references, 18 figures, 5 tables.
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *HANFORD RESERVATION -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: AIR POLLUTION; BATTELLE PACIFIC NORTHWEST LABORATORIES; EXPERIMENTAL DATA; PARTICLE SIZE

5003759

EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; ISOTOPES; MONITORING; NATIONAL ORGANIZATIONS; NUCLEI; NUMERICAL DATA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; POLLUTION; RADIOISOTOPES; SIZE; US DOE; US ERDA; US ORGANIZATIONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B3310* -- Radioactive materials monitoring & transport; meteorology

10/5/454 (Item 154 from file: 103)
02052280 GRA-87-90523; ERA-13-004258; EDB-87-180239
Title: Operation Redwing. OPS Plan 1-56. Volume 2
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 19 Feb 1987 p 376
Report Number(s): AD-A-995498/3/XAB
Note: Extracted version of report dated 15 February 1956; Availability: Microfiche copies only
Document Type: Report
Language: English
Journal Announcement: EDB8711
Availability: NTISMF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *NUCLEAR EXPLOSIONS -- REDWING PROJECT; *REDWING PROJECT -- PERSONNEL MONITORING
Descriptors: AIRCRAFT; BIKINI; ENIWETOK; MILITARY PERSONNEL; SAFETY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; OCEANIA; PERSONNEL; RADIATION MONITORING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/455 (Item 155 from file: 103)
02042212 GRA-87-60120; EDB-87-170169
Author(s): Brown, G.
Title: Strategic Defense Initiative Demonstration/Validation program environmental assessments summary
Corporate Source: Strategic Defense Initiative Organization, Washington, DC (USA). Systems Engineering
Publication Date: Aug 1987 p 155
Report Number(s): AD-A-183000/9/XAB
Document Type: Report
Language: English
Journal Announcement: ERA8710
Availability: NTIS, PC E02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The Strategic Defense Initiative Organization (SDIO) and its proponents (the U.S. Army and U.S. Air Force) plan to conduct Demonstration/Validation tests of the six technologies to demonstrate their respective ability to perform their required tasks, and to validate the requirements to determine their feasibility for a future decision on whether to proceed with Full-Scale Development. Demonstration/Validation tests would be conducted at 14 government facilities across the United States and the Republic of the Marshall Islands, and at contractor facilities. Tests would include analyses, simulations, component/assembly tests, and flight tests. This document summarizes the findings expressed in the six Environmental Assessments for Demonstration/Validation testing of the individual technologies, and analyzes the potential cumulative environmental consequences of testing of multiple technologies at a given facility. In the event that any other technology is ready for entry into Demonstration/Validation

Major Descriptors: *BALLISTIC MISSILE DEFENSE -- TEST FACILITIES; *MILITARY FACILITIES -- TEST FACILITIES; *TEST FACILITIES -- ENVIRONMENTAL IMPACTS
Descriptors: CALIFORNIA; COLORADO; CONTRACTORS; FLIGHT TESTING; FLORIDA; MARSHALL ISLANDS; MARYLAND; MASSACHUSETTS; NEVADA; NEW YORK; SIMULATION ; TENNESSEE; VALIDATION; VIRGINIA
Broader Terms: FEDERAL REGION I; FEDERAL REGION II; FEDERAL REGION III; FEDERAL REGION IV; FEDERAL REGION IX; FEDERAL REGION VIII; ISLANDS; MICRONESIA; NATIONAL DEFENSE; NORTH AMERICA; OCEANIA; TESTING; USA
Subject Categories: 350000* -- Arms Control -- (1987-)
290300 -- Energy Planning & Policy -- Environment, Health, & Safety

10/5/456 (Item 156 from file: 103)
02037274 EDB-87-165230
Title: Geologic reconnaissance of natural fore-reef slope and a large submarine rockfall exposure, Enewetak Atoll
Author(s): Halley, R.B.; Slater, R.A.
Affiliation: Geological Survey, Denver, CO
Conference Title: American Association of Petroleum Geologists annual meeting
Conference Location: Los Angeles, CA, USA Conference Date: 7 Jun 1987
Source: AAPG (Am. Assoc. Pet. Geol.) Bull. (United States) v 71:5.
Coden: AABUD
Publication Date: May 1987 p 563-564
Report Number(s): CONF-870606-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8710
Subfile: JMT (DOE contractor)
Country of Origin: United States
Abstract: In 1958 a submarine rockfall exposed a cross section through the reef and fore-reef deposits along the northwestern margin of Enewetak Atoll, Marshall Islands. Removal of more than 10/sup 8/ MT of rock left a cirque-shaped submarine scarp 220 m high, extending back 190 m into the modern reef, and 1000 m along the reef trend. The scarp exposed older, steeply dipping beds below 220 m along which the rockfall detached. They sampled this exposure and the natural fore-reef slope surrounding it in 1984 and 1985 using a manned submersible. The natural slope in this area is characterized by three zone: (1) the reef plate, crest, and near fore reef that extends from sea level to -16 m, with a slope of less than 10/sup 0/, (2) the bypass slope that extends from -16 to -275 m, with slopes of 55/sup 0/ decreasing to 35/sup 0/ near the base, and (3) a debris slope of less than 35/sup 0/ below -275 m. Vertical walls, grooves, and chutes, common on other fore-reef slopes, are sparse on the northwestern slope of Enewetak. The scarp exposes three stratigraphic units that are differentiated by surficial appearance: (1) a near-vertical wall from the reef crest to 76 m that appears rubbly, has occasional debris-covered ledges, and is composed mainly of coral; (2) a vertical to overhanging wall from -76 m to -220 m that is massive and fractured, and has smooth, blocky surfaces; and (3) inclined bedding below -220 m along which the slump block has fractured, exposing a dip slope of hard, dense, white limestone and dolomite that extends below -400 m. Caves occur in all three units. Open cement-lined fractures and voids layered with cements are most common in the middle unit, which now lies within the thermocline. Along the sides of the scarp are exposed fore-reef boulder beds dipping at 30/sup 0/ toward the open sea; the steeper (55/sup 0/) dipping natural surface truncates these beds, which gives evidence of the erosional nature of the bypass slope.
Major Descriptors: *ENIWETOK -- GEOLOGY
Descriptors: GEOLOGIC SURVEYS; REEFS
Broader Terms: GEOLOGIC STRUCTURES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; SURVEYS
Subject Categories: 580100* -- Geology & Hydrology -- (-1989)

5003761

02036607 EDB-87-164563
Title: Operations order serial number 1-52
Corporate Source: Test Aircraft Unit, Bergstrom AFB, TX (USA)
Publication Date: 1 Aug 1952 p 65
Report Number(s): AD-A-995497/5/XAB; TAU-132.4.2
Document Type: Report
Language: English
Journal Announcement: ERA8710
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *IVY PROJECT -- PERSONNEL MONITORING; *NUCLEAR EXPLOSIONS -- IVY PROJECT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS -- SAMPLING
Descriptors: AIRCRAFT
Broader Terms: CLOUDS; EXPLOSIONS; MONITORING; NUCLEAR EXPLOSIONS; RADIATION MONITORING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/458 (Item 158 from file: 103)
02031562 EDB-87-159517
Title: Thyroid neoplasia in Marshall Islanders exposed to nuclear fallout
Author(s): Hamilton, T.E.; van Belle, G.; LoGerfo, J.P.
Affiliation: Univ. of Washington, Seattle
Source: JAMA, J. Am. Med. Assoc. (United States) v 258:5. Coden: JAMAA
Publication Date: 7 Aug 1987 p 629-635
Document Type: Journal Article
Language: English
Journal Announcement: INS8710
Subfile: INS (US Atomindex input). NLM (National Library of Medicine)
Country of Origin: United States
Abstract: We studied the risk of thyroid neoplasia in Marshall Islanders exposed to radioiodines in nuclear fallout from the 1954 BRAVO thermonuclear test. We screened 7266 Marshall Islanders for thyroid nodules; the islanders were from 14 atolls, including several southern atolls, which were the source of the best available unexposed comparison group. Using a retrospective cohort design, we determined the prevalence of thyroid nodularity in a subgroup of 2273 persons who were alive in 1954 and who therefore were potentially exposed to fallout from the BRAVO test. For those 12 atolls previously thought to be unexposed to fallout, the prevalence of thyroid nodules ranged from 0.9% to 10.6%. Using the distance of each atoll from the test site as a proxy for the radiation dose to the thyroid gland, a weighted linear regression showed an inverse linear relationship between distance and the age-adjusted prevalence of thyroid nodules. Distance was the strongest single predictor in logistic regression analysis. A new absolute risk estimate was calculated to be 1100 excess cases/Gy/y/1 X 10(6) persons (11.0 excess cases/rad/y/1 million persons), 33% higher than previous estimates. We conclude that an excess of thyroid nodules was not limited only to the two northern atolls but extended throughout the northern atolls; this suggests a linear dose-response relationship.
Major Descriptors: *NEOPLASMS -- RADIOINDUCTION; *THYROID -- NEOPLASMS; *THYROID -- RADIATION DOSES
Descriptors: DELAYED RADIATION EFFECTS; DOSE-RESPONSE RELATIONSHIPS; FALLOUT; GEOGRAPHICAL VARIATIONS; MARSHALL ISLANDS; THYROIDECTOMY
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DISEASES; DOSES; ENDOCRINE GLANDS; GLANDS; ISLANDS; MEDICINE; MICRONESIA; OCEANIA; ORGANS; RADIATION EFFECTS; SURGERY; VARIATIONS
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics &

10/5/459 (Item 159 from file: 103)
02014263 ERA-12-043956; EDB-87-142216
Title: Operation Redwing. CJTF - Seven Administrative Order 1-56
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 30 Mar 1987 p 62
Report Number(s): AD-A-995487/6/XAB; CJTF-7-AO-1-56(EX)
Note: Extracted version of report dated 20 Jan 1956
Document Type: Report
Language: English
Journal Announcement: EDB8708
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *NUCLEAR EXPLOSIONS -- REDWING PROJECT; *REDWING PROJECT -- ADMINISTRATIVE PROCEDURES
Descriptors: ENIWETOK; PLANNING
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/460 (Item 160 from file: 103)
02014260 EDB-87-142213
Author(s): Thomas, C.; Goetz, J.; Klemm, J.
Title: Analysis of radiation exposure for personnel on the residence islands of Enewetak Atoll after Operation Greenhouse, 1951-1952. Technical report, 3 December 85-20 April 1987
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 20 Apr 1987 p 31
Report Number(s): AD-A-181506/7/XAB; SAIC-85/1935
Document Type: Report
Language: English
Journal Announcement: ERA8709
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The radiological environments and reconstructed for the residence islands of Enewetak Atoll following the roll-up phase of Operation GREENHOUSE in May 1951. The residence islands received fallout during Operation GREEHOUSE (April/May 1951) as a result of Shots, DOG, EASY, and ITEM. From the reconstructed radiological environments and assumed personnel activity scenarios, equivalent personnel film badge doses are calculated, by month, from June 1951 to June 1952. For a individual assigned to Enewetak Atoll during this period, a mean dose of 1.5-2.0 rem would have been accrued, depending on the residence island to which he was assigned.
Major Descriptors: *ENIWETOK -- NUCLEAR EXPLOSIONS; *GREENHOUSE PROJECT -- RADIATION DOSES; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- GREENHOUSE PROJECT
Descriptors: FALLOUT
Broader Terms: DOSES; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; PERSONNEL
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/461 (Item 161 from file: 103)
02006622 EDB-87-134295
Author(s): Young, G.A.
Title: Operation Crossroads. A method for estimating the initial gamma-radiation dosage from an underwater burst of a nuclear weapon
Corporate Source: Naval Ordnance Lab., White Oak, MD (USA)

Note: Extracted version of report dated 1 May 1956
Document Type: Report
Language: English
Journal Announcement: ERA8708
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *CROSSROADS PROJECT -- GAMMA RADIATION; *NUCLEAR EXPLOSIONS -- UNDERWATER EXPLOSIONS; *UNDERWATER EXPLOSIONS -- CROSSROADS PROJECT
Descriptors: DOSE RATES; DOSIMETRY
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/462 (Item 162 from file: 103)
01998492 ERA-12-039552; EDB-87-126164
Title: Operation Crossroads. Test of target airplane, Model TBM-3E, Serial Number 69169
Corporate Source: Naval Air Material Center, Philadelphia, PA (USA). Aeronautical Materials Lab.
Publication Date: 25 Apr 1950 p 157
Report Number(s): AD-A-995466/0/XAB; NAMC-AML-AE-540001
Document Type: Report
Language: English
Journal Announcement: EDB8707
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *AIRCRAFT -- PHYSICAL RADIATION EFFECTS; *CROSSROADS PROJECT -- PHYSICAL RADIATION EFFECTS; *METALS -- PHYSICAL RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- CROSSROADS PROJECT; *OILS -- PHYSICAL RADIATION EFFECTS; *PLASTICS -- PHYSICAL RADIATION EFFECTS
Descriptors: DECONTAMINATION; RADIOACTIVITY
Broader Terms: CLEANING; ELEMENTS; EXPLOSIONS; MATERIALS; NUCLEAR EXPLOSIONS; ORGANIC COMPOUNDS; OTHER ORGANIC COMPOUNDS; PETROCHEMICALS; PETROLEUM PRODUCTS; RADIATION EFFECTS; SYNTHETIC MATERIALS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/463 (Item 163 from file: 103)
01998491 ERA-12-039551; EDB-87-126163
Title: Operation Sandstone. Scientific director's report of atomic weapon tests at Eniwetok, 1948. Annex 12. Parts 1 and 2. Biological and animal container studies (Service Test Number 7). Sandstone report No. 33
Corporate Source: Cornell Univ., Ithaca, NY (USA). Dept. of Botany
Publication Date: 1948 p 86
Report Number(s): AD-A-995463/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8707
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *NUCLEAR EXPLOSIONS -- SANDSTONE PROJECT; *SANDSTONE PROJECT -- BIOLOGICAL RADIATION EFFECTS
Descriptors: BACTERIA; FUNGI; INSECTS; PLANT GROWTH; SEEDS

EFFECTS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/464 (Item 164 from file: 103)
01998490 ERA-12-037590; EDB-87-126162
Title: Operation Greenhouse. Scientific director's report of atomic weapon tests at eniwetok, 1951. Annex 9.1. Staff reports. Parts 1 to 4. Annex 9.4. Documentary photography
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: 1951 p 93
Report Number(s): AD-A-995462/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8707
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *GREENHOUSE PROJECT -- PHOTOGRAPHY; *NUCLEAR EXPLOSIONS -- GREENHOUSE PROJECT
Descriptors: ENIWETOK; NUCLEAR WEAPONS; TESTING
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/465 (Item 165 from file: 103)
01991761 EDB-87-119432
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Jokela, T.A.; Brunk, J.A.
Title: Concentrations of radionuclides in fish collected from Bikini Atoll between 1977 and 1984
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Jul 1986 p 62
Report Number(s): UCID-20754
Order Number: DE87011905
Contract Number (DOE): W-7405-ENG-48
Note: Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report; Numerical data
Language: English
Journal Announcement: ERA8708
Availability: NTIS, PC A04/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: This report summarizes all available data on the concentrations of radionuclides in fish from Bikini Atoll between 1977 and 1984. As found in other global studies, /sup 137/Cs is most highly accumulated in edible flesh of all species of fish, the lowest fractions are found in the bone or liver. The mean concentration of /sup 137/Cs in muscle of reef fish from the southern part of the atoll is comparable to the global fallout concentration measured in market samples of fish collected from Chicago, Illinois, in 1982. /sup 90/Sr is generally associated with non-edible parts of fish, such as bone or viscera. Twenty-five to fifty percent of the total body burden of /sup 60/Co is accumulated in the muscle tissue; the remainder is distributed among the liver, skin, and viscera. The mean concentration of /sup 60/Co in fish has been decreasing at a rate faster than radiological decay alone. Most striking is the range of /sup 207/Bi concentrations among different species of fish collected at the same time and place. Highest

other reef fish, such as mullet, surgeonfish, and parrotfish, /sup 207/Bi was usually below detection limits by gamma spectrometry. Over 70% of the whole-body activity of /sup 207/Bi in goatfish is associated with the muscle tissue, whereas less than 5% is found in the muscle of mullet and surgeonfish. Neither /sup 239 +240/Pu nor /sup 241/Am is significantly accumulated in the muscle tissue of any species of fish. Apparently, /sup 238/Pu is in a more readily available form for accumulation by fishes than /sup 239 +240/Pu. Based on a daily ingestion rate of 200 q of fish flesh, dose rates to individuals through the fish-food ingestion pathway are well below current Federal guidelines.
Major Descriptors: *FISHES -- RADIONUCLIDE KINETICS
Descriptors: AMERICIUM 241; BIKINI; BIOLOGICAL ACCUMULATION; BISMUTH 207; CESIUM 137; COBALT 60; COMPILED DATA; DATA COMPILATION; PLUTONIUM 238; PLUTONIUM 239; PLUTONIUM 240; RADIOACTIVITY; RADIOECOLOGICAL CONCENTRATION; REVIEWS; STRONTIUM 90; TISSUE DISTRIBUTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DISTRIBUTION; DOCUMENT TYPES; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
560162 -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells
INIS Subject Categories: B3200* -- Water
C2120 -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/466 (Item 166 from file: 103)
01991638 EDB-87-119309
Title: Gamma-ray spectrum of the radiaoctive dust produced by the super-hydrogen bomb test explosion on March 1, 1954
Author(s): Shimizu, Sakae
Affiliation: Kyoto Univ., Japan
Conference Title: 3. international symposium on radiation physics
Conference Location: Ferrara, Italy Conference Date: 30 Sep 1985
Source: Nucl. Instrum. Methods Phys. Res., Sect. A. (Netherlands) v 255:1/2. Coden: NIMAE
Publication Date: 15 Mar 1987 p 177-182
Report Number(s): CONF-850925-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8707
Subfile: INIS (non-US Atomindex input AIX)
Country of Origin: Japan
Abstract: The super-hydrogen bomb test explosion, the so-called Bravo test of a fission-fusion-fission bomb, was carried out on Bikini Atoll in the mid-Pacific on March 1, 1954. Twenty-three Japanese fishermen on board a fishing boat about 90 miles north-east of the test site were attacked unexpectedly by the fallout, radioactive fine debris of coral reef. Within several months after the accident by radiochemical analysis about 20 different nuclides of fission products and, in addition, a considerable amount of /sup 235/U were discovered from the fallout. As we have been preserving a minute amount of the original fallout dust collected on board the fishing boat 31 years ago, measurements of ..gamma.. rays from it have recently been used to find

241/Am, /sup 155/Eu, /sup 137/Cs and /sup 60/Co. Absolute intensities of these four nuclides, still remaining 31 years after the explosion of the bomb, have been estimated. Some discussion on our finding is presented.
Major Descriptors: *THERMONUCLEAR EXPLOSIONS -- RADIOACTIVITY
Descriptors: AMERICIUM 241; BARIUM; BIKINI; BISMUTH; BRAVO EVENT; CESIUM 137; COBALT 60; DUSTS; ENERGY SPECTRA; EUROPIUM 155; FALLOUT; FISSION PRODUCTS; GADOLINIUM; GAMMA RADIATION; GAMMA SPECTRA; NEPTUNIUM; NUCLEAR WEAPONS; THORIUM 234; X RADIATION; X-RAY SPECTRA
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ACTINIDES; ALKALI METAL ISOTOPES; ALKALINE EARTH METALS; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CASTLE PROJECT; CESIUM ISOTOPES; COBALT ISOTOPES; DAYS LIVING RADIOISOTOPES; ELECTROMAGNETIC RADIATION; ELEMENTS; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EXPLOSIONS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IONIZING RADIATIONS; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MATERIALS; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIATIONS; RADIOACTIVE MATERIALS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RARE EARTHS; SPECTRA; SURFACE EXPLOSIONS; THORIUM ISOTOPES; TRANSURANIUM ELEMENTS; WEAPONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/467 (Item 167 from file: 103)
01991514 EDB-87-119185
Author(s): Weitz, R.; Thomas, C.; Klemm, J.; Stuart, J.; Knowles, M.
Title: Analysis of radiation exposure for naval units of Operation Crossroads. Volume 3. (Appendix B) support ships. Technical report
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 3 Mar 1982 p 452
Report Number(s): AD-B-090883/0/XAB; SAI-84-1567-VOL-3
Note: See Also Volume 1, AD--A152-702; Distribution limitation now removed
Document Type: Report
Language: English
Journal Announcement: ERA8707
Availability: NTIS, PC A20/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: External radiation doses are reconstructed for crews of support and target ships of Joint Task Force One at Operation CROSSROADS, 1946. Volume I describes the reconstruction methodology, which consists of modeling the radiation environment, to include the radioactivity of lagoon water, target ships, and support ship contamination; retracing ship paths through this environment; and calculating the doses to shipboard personnel. The USS RECLAIMER, a support ship, is selected as a representative ship to demonstrate this methodology. Doses for all other ships are summarized. Volume II (Appendix A) details the results for target ship personnel. Volume III (Appendix B) details the results for support ship personnel. Calculated doses for more than 36,000 personnel aboard support ships while at Bikini range from zero to 1.7 rem. Of those approximately 34,000 are less than 0.5 rem. From the models provided, doses due to target ship reboarding and doses accrued after departure from Bikini can be calculated, based on the individual circumstances of exposure.
Major Descriptors: *CROSSROADS PROJECT -- SHIPS; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- CROSSROADS PROJECT; *SHIPS -- MILITARY PERSONNEL
Descriptors: CONTAMINATION; RADIATION EFFECTS
Broader Terms: DOSES; EXPLOSIONS; NUCLEAR EXPLOSIONS; PERSONNEL
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear --

10/5/468 (Item 168 from file: 103)
01991513 EDB-87-119184
Author(s): Weitz, R.; Thomas, C.; Klemm, J.; Stuart, J.; Knowles, M.
Title: Analysis of radiation exposure for naval units of Operation Crossroads. Volume 2. (Appendix A) target ships. Technical report
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 3 Mar 1982 p 188
Report Number(s): AD-B-090882/2/XAB; SAI-84-1567-VOL-2
Note: See Also Volume 3, AD--B090-883L; Distribution limitation now removed
Document Type: Report
Language: English
Journal Announcement: ERA8707
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: External radiation doses are reconstructed for crews of support and target ships of Joint Task Force One at Operation CROSSROADS, 1946. Volume I describes the reconstruction methodology, which consists of modeling the radiation environment, to include the radioactivity of lagoon water, target ships, and support ship contamination; retracing ship paths through this environment; and calculating the doses to shipboard personnel. The USS RECLAIMER, a support ship, is selected as a representative ship to demonstrate this methodology. Doses for all other ships are summarized. Volume II (Appendix A) details the results for target ship personnel. Volume III (Appendix B) details the results for support ship personnel. Calculated doses for more than 36,000 personnel aboard support ships while at Bikini range from zero to 1.7 rem. Of those, approximately 34,000 are less than 0.5 rem. From the models provided, doses due to target ship reboarding and doses accrued after departure from Bikini can be calculated, based on the individual circumstances of exposure.
Major Descriptors: *CROSSROADS PROJECT -- SHIPS; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- CROSSROADS PROJECT; *SHIPS -- MILITARY PERSONNEL
Descriptors: CONTAMINATION; RADIATION EFFECTS
Broader Terms: DOSES; EXPLOSIONS; NUCLEAR EXPLOSIONS; PERSONNEL
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/469 (Item 169 from file: 103)
01984153 EDB-87-111823
Title: Gamma-ray spectrum of the radiaoctive dust produced by the super-hydrogen bomb test explosion on March 1, 1954
Author(s): Shimizu, S.
Affiliation: Kyoto Univ., Japan
Conference Title: 3. international symposium on radiation physics
Conference Location: Ferrara, Italy Conference Date: 30 Sep 1985
Source: Nucl. Instrum. Methods Phys. Res. (Netherlands) v 255:1/2.
Coden: NIMRD
Publication Date: 15 Mar 1987 p 177-182
Report Number(s): CONF-850925-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8706
Subfile: NLN (Netherlands (sent to DOE from))
Country of Origin: Japan
Abstract: The super-hydrogen bomb test explosion, the so-called Bravo test of a fission-fusion-fission bomb, was carried out on Bikini Atoll in the mid-Pacific on March 1, 1954. Twenty-three Japanese fishermen on board a fishing boat about 90 miles north-east of the test site were attacked unexpectedly by the fallout, radioactive fine debris of coral

addition, a considerable amount of /sup 235/U were discovered from the fallout. As we have been preserving a minute amount of the original fallout dust collected on board the fishing boat 31 years ago, measurements of ..gamma.. rays from it have recently been used to find some active nuclides, if still existing. In the ..gamma..-ray spectrum observed there exist evident peaks of ..gamma.. and X-rays from /sup 241/Am, /sup 155/Eu, /sup 137/Cs and /sup 60/Co. Absolute intensities of these four nuclides, still remaining 31 years after the explosion of the bomb, have been estimated. Some discussion on our finding is presented.

Major Descriptors: *FALLOUT -- RADIOACTIVITY; *THERMONUCLEAR EXPLOSIONS -- FALLOUT

Descriptors: AMERICIUM 241; BARIUM; BIKINI; BISMUTH; BRAVO EVENT; CESIUM 137; COBALT 60; DUSTS; ENERGY SPECTRA; EUROPIUM 155; FISSION PRODUCTS; GADOLINIUM; GAMMA SPECTRA; NEPTUNIUM; NUCLEAR WEAPONS; RADIATION MONITORING; THORIUM 234; X-RAY SPECTRA

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ACTINIDES; ALKALI METAL ISOTOPES; ALKALINE EARTH METALS; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CASTLE PROJECT; CESIUM ISOTOPES; COBALT ISOTOPES; DAYS LIVING RADIOISOTOPES; ELEMENTS; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EXPLOSIONS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MATERIALS; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOACTIVE MATERIALS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RARE EARTHS; SPECTRA; SURFACE EXPLOSIONS; THORIUM ISOTOPES; TRANSURANIUM ELEMENTS; WEAPONS; YEARS LIVING RADIOISOTOPES

Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/470 (Item 170 from file: 103)

01983216 ERA-12-035353; EDB-87-110886

Author(s): Smith, O.P.; Chu, Y.H.

Title: Preliminary design of a landfill and revetment on Bikini Island, Republic of the Marshall Islands. Final report

Corporate Source: Coastal Engineering Research Center, Vicksburg, MS (USA)

Publication Date: Feb 1987 p 59

Report Number(s): AD-A-178304/2/XAB; CERC-87-5

Document Type: Report

Language: English

Journal Announcement: EDB8707

Availability: NTIS, PC A04/MF A01.

Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)

Country of Origin: United States

Country of Publication: United States

Abstract: Topsoil on Bikini Island, located 2,500 miles southwest of Hawaii at 113 deg 35 min N, 165 deg 25 min E, was contaminated by radioactive fallout from nuclear weapons tests in the late 1940's and early 1950's. The uptake of this radioactive fallout, primarily cesium-137 in plants, has prevented resettlement of the island by the native population. One alternative solution proposed by the congressionally appointed Bikini Atoll Rehabilitation Committee involves removal of the contaminated topsoil and placement of the excavated material as a landfill on the 2,500-ft-wide reef flat adjacent to the eastern (windward) shore of the island. This paper explores that alternative by first developing an extremal wave climatology offshore of Bikini Island from 21 years (1959-1979) of typhoon data published by the Joint Typhoon Warning Center on Guam. Deepwater wave conditions just offshore of the reef are estimated and transformed to the point of breaking at the edge of the reef. Storm surge is estimated based on these same parameters. Wave setup on the reef flat is estimated based on the simulated breaking

fractional decay are estimated to define wave conditions at the toe of the proposed revetment. A rubble-mound revetment design stable in these conditions, armored by coral limestone quarried from the reef flat, is then formulated and corresponding material quantities estimated.
Major Descriptors: *BIKINI -- SOILS; *CLIMATES -- DATA ANALYSIS; *FALLOUT; *GROUND DISPOSAL -- SANITARY LANDFILLS; *RADIOACTIVE MATERIALS -- RADIOACTIVE WASTE DISPOSAL; *RADIOACTIVE WASTE DISPOSAL -- GROUND DISPOSAL; *SOILS -- DECONTAMINATION; *SOILS -- FALLOUT
Descriptors: ARMOR; CONTAMINATION; DECAY; DEPTH; FRACTIONATION; LIMESTONE; MARSHALL ISLANDS; REEFS; STORMS; SURGES
Broader Terms: CARBONATE ROCKS; CLEANING; DIMENSIONS; DISASTERS; GEOLOGIC STRUCTURES; ISLANDS; MANAGEMENT; MARSHALL ISLANDS; MATERIALS; MICRONESIA; OCEANIA; ROCKS; SEDIMENTARY ROCKS; SEPARATION PROCESSES; WASTE DISPOSAL; WASTE MANAGEMENT
Subject Categories: 400702* -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
052002 -- Nuclear Fuels -- Waste Disposal & Storage

10/5/471 (Item 171 from file: 103)
01969842 ERA-12-031630; EDB-87-097510
Author(s): Henry, T.W.; Wardlaw, B.R.
Title: Pacific Enewetak Atoll Crater Exploration (PEACE) Program, Enewetak Atoll, Republic of the Marshall Islands. Part 3. Stratigraphic analysis and other geologic and geophysical studies in vicinity of Koa and Oak craters
Corporate Source: Geological Survey, Denver, CO (USA)
Publication Date: 1986 p 412
Report Number(s): AD-A-177705/1/XAB; -86-555
Note: See also Part 1, AD-A176-634
Document Type: Report
Language: English
Journal Announcement: EDB8706
Availability: NTIS, PC A18/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of the PEACE Program was to provide a highly credible, multidisciplinary set of geologic, geophysical, and material-properties data in order to identify crater dimensions and features for two high-yield nuclear craters and to better understand the dynamic processes that initially formed these craters and that subsequently modified them. These data are essential to the Department of Defense to better understand the survivability of strategic defense systems in the event of a nuclear attack. Subjects include: physical Stratigraphic Framework; Sr-Isotope Framework; Mineralogy; Organic Content; Insoluble Residues; Downhole Geophysical Logs; Borehole gravity Surveys; Seismic Reference Surveys; Benthic Samples; Additional Paleontologic Studies; Radiation Chemistry ; Additional Sea-Floor Observations; Crater Interpretation.
Major Descriptors: *CRATERS -- DATA ANALYSIS; *NUCLEAR EXPLOSIONS -- UNDERWATER EXPLOSIONS; *UNDERWATER EXPLOSIONS -- CRATERS
Descriptors: DYNAMICS; MARSHALL ISLANDS; MINERALOGY; RADIATION CHEMISTRY; STRATIGRAPHY
Broader Terms: CAVITIES; CHEMISTRY; EXPLOSIONS; GEOLOGY; ISLANDS; MECHANICS ; MICRONESIA; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/472 (Item 172 from file: 103)
01962411 INS-87-019083; EDB-87-090076
Title: Toxoplasma antibodies and retinochoroiditis in the Marshall Islands and their association with exposure to radioactive fallout

Source: Am. J. Trop. Med. Hyg. (United States) v 2. Coden: AJTHA
Publication Date: Mar 1987 p 315-320
Document Type: Journal Article
Language: English
Journal Announcement: ERA8705
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input). NLM (National Library of Medicine)
Country of Origin: United States
Abstract: Nearly universal serologic evidence of Toxoplasma gondii infection was found to have occurred by adulthood in 517 Marshallese tested in 1981-1982. The prevalence and incidence of retinal lesions compatible with toxoplasmosis were 3.9% and 273 cases/year/100,000 seropositive persons, respectively, thus indicating a significant public health problem. Seronegativity was significantly more common in a subgroup of Marshallese that had received 110-190 rads of total-body gamma radiation as a consequence of accidental exposure to radioactive fallout in 1954. Despite this finding there was no evidence of an increase in clinically significant lesions in exposed persons.
Major Descriptors: *ANTIBODIES -- RADIOINDUCTION; *PARASITIC DISEASES -- ANTIBODIES; *RETICULOENDOTHELIAL SYSTEM -- BIOLOGICAL RADIATION EFFECTS
Descriptors: FALLOUT; GAMMA RADIATION; HUMAN POPULATIONS; IMMUNITY; MARSHALL ISLANDS; PARASITES; RETINA; SENSE ORGANS DISEASES; WHOLE-BODY IRRADIATION
Broader Terms: ANIMAL TISSUES; BIOLOGICAL EFFECTS; BODY; BODY AREAS; DISEASES; ELECTROMAGNETIC RADIATION; EXTERNAL IRRADIATION; EYES; FACE; HEAD; INFECTIOUS DISEASES; IONIZING RADIATIONS; IRRADIATION; ISLANDS; MICRONESIA; OCEANIA; ORGANS; POPULATIONS; RADIATION EFFECTS; RADIATIONS ; SENSE ORGANS; TISSUES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/473 (Item 173 from file: 103)
01961496 EDB-87-089161
Author(s): Henry, T.W.; Wardlaw, B.R.; Skipp, B.; Major, R.P.; Tracey, J.I.
Title: Pacific Enewetak Atoll Crater Exploration (PEACE) program, Enewetak Atoll, Republic of the Marshall Islands. Part 1. Drilling operations and descriptions of boreholes in vicinity of KOA and OAK craters
Corporate Source: Geological Survey, Denver, CO (USA)
Publication Date: 1986 p 836
Report Number(s): AD-A-176634/4/XAB
Document Type: Report
Language: English
Journal Announcement: ERA8705
Availability: NTIS, PC A99/MF E04.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: From mid-1984 through mid-1985, the United States Geological Survey engaged in an investigation of two craters formed from high-yield, near-surface nuclear bursts at Enewatak Atoll. The craters studied, KOA and OAK, resulted from 1.4- and 8.9-megaton, near-surface bursts detonated near the northern perimeter of the Enewetak lagoon on May 12 and June 28, 1958, respectively. At that time, Enewetak was a part of the Pacific Proving Grounds (PPG). OAK and KOA are among the only high-yield nuclear explosion craters available for studies of cratering processes and crater-related effects. The objects of this program were: (1) to identify major crater dimensions, morphology, and structures; (2) to provide a data base for material-properties, shock-metamorphic, and other types of related studies; and (3) to gain a better understanding of both the process that formed the excavational crater and that altered that initial feature to its present form. These

of survivability of various strategic defense systems.
Major Descriptors: *CRATERS -- DATA ANALYSIS; *ENIWETOK -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- CRATERS
Descriptors: BOREHOLES; DRILLING
Broader Terms: CAVITIES; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/474 (Item 174 from file: 103)
01954896 EDB-87-082560
Title: Operation Castle. Historical installments 2, 3, and 4. Rept. No. 2, 1 October 1953-31 January 1954
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 298
Report Number(s): AD-A-995451/2/XAB
Note: Extracted version of report dated 26 May 54.; Availability: Microfiche copies only
Document Type: Report
Language: English
Journal Announcement: ERA8705
Availability: NTISMF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This volume is part of a historical report on the activities of Task Group 7.2 during Operation Castle for the period of October 1953 through April 1954. This task group provides administrative, operational, and logistical support for this operation. Classified material was removed in order to make the information available on an unclassified, open-publication basis, to any interested parties.
Major Descriptors: *CASTLE PROJECT -- HISTORICAL ASPECTS
Descriptors: ADMINISTRATIVE PROCEDURES; MANAGEMENT; OPERATION
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/475 (Item 175 from file: 103)
01948033 EDB-87-075695
Title: Thyroid cancer in the Marshallese: relative risk of short-lived internal emitters and external radiation exposure
Author(s): Lessard, E.T.; Brill, A.B.; Adams, W.H.; Schlafke-Stelson, A.T.; Watson, E.E. (eds.)
Affiliation: Brookhaven National lab., Upton, NY
Title: Fourth international radiopharmaceutical dosimetry symposium
Corporate Source: Oak Ridge Associated Universities, Inc., TN (USA)
Conference Title: Radiopharmaceutical dosimetry symposium
Conference Location: Oak Ridge, TN, USA Conference Date: 5 Nov 1985
Publication Date: Apr 1986 p 628-647
Report Number(s): CONF-851113-
Order Number: DE86010102
Document Type: Analytic of a Report; Conference literature; Numerical data
Language: English
Journal Announcement: ERA8705
Availability: NTIS, PC A99/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: In a study of the comparative effects of internal versus external irradiation of the thyroid in young people, we determined that the dose from internal irradiation of the thyroid with short-lived internal emitters produced several times less thyroid cancer than did the same dose of radiation given externally. The authors determined this finding

to internal and external thyroid radiation at an average level of 1400 rad. The external risk coefficient ranged between 2.5 and 4.9 cancers per million person-rad-years at risk, and thus, from our computations, the internal risk coefficient for the Marshallese children was estimated to range between 1.0 and 1.4 cancers per million person-rad-years at risk. In contrast, for individuals more than 10 years of age at the time of exposure, the dose from internal irradiation of the thyroid with short-lived internal emitters produced several times more thyroid cancer than did the same dose of radiation given externally. The external risk coefficients for the older age groups were reported in the above literature to be in the range of 1.0 to 3.3 cancers per million person-rad-years-at risk. The authors computed internal risk coefficients of 3.3 to 8.1 cancers per million person-rad-years at risk for adolescent and adult groups. This higher sensitivity to cancer induction in the exposed adolescents and adults, is different from that seen in other exposed groups. The small number of cancers in the exposed population and the influence of increased levels of TSH, nonuniform irradiation of the thyroid, and thyroid cell killing at high dose make it difficult to draw firm conclusions from these studies. 14 references, 8 tables.

Major Descriptors: *NEOPLASMS -- RADIOINDUCTION; *THYROID -- NEOPLASMS; *THYROID -- RADIATION DOSES

Descriptors: AGE DEPENDENCE; EXPERIMENTAL DATA; MARSHALL ISLANDS; RADIATION ACCIDENTS; RISK ASSESSMENT

Broader Terms: ACCIDENTS; BODY; DATA; DISEASES; DOSES; ENDOCRINE GLANDS; GLANDS; INFORMATION; ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; ORGANS

Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/476 (Item 176 from file: 103)

01939471 NOV-87-046438; EDB-87-067132

Title: Review of RBE and OER values for Cf-neutrons

Author(s): Kal, H.B.
Affiliation: Radiobiological Institute TNO, Rijswijk

Source: Nucl. Sci. Appl. (United States) v 2:3. Coden: NSAPD
Publication Date: 1986 p 303-316
Document Type: Journal Article
Language: English
Journal Announcement: INS8704
Subfile: INS (US Atomindex input). NOV (DOE contractor)
Country of Origin: Netherlands

Abstract: The isotope californium-252 was first isolated and characterized after the nuclear explosion which took place in the Eniwetok Island complex in November 1952. Californium decays by alpha emission and by spontaneous fission where fission fragments, X and gamma rays and neutrons are emitted. The effective half-life dominated by alpha decay is about 2.66 year. Since the discovery of /sup 252/Cf and its production for biological research in the late sixties, several tens of reports on responses of many biological systems to treatments with Cf-neutrons have been published. The two quantities of practical interest are the relative biological effectiveness, RBE, and the oxygen enhancement ratio, OER. The RBE is a measure for comparison of the doses of californium and radium gamma rays needed for a specific biological endpoint. Laboratory studies of RBE can provide a useful guide to the doses to be applied in clinical practice with californium radiation. The OER is a measure for comparison of the doses required for a specific biological endpoint in the absence and in the presence of oxygen. From numerous experiments it has been established that the OER of fast neutrons is lower than that of gamma rays. It is commonly believed that one of the limitations of radiotherapy is the presence of a hypoxic fraction of cells in tumours. Therefore, the potential

experimental data on these two quantities is provided.
Major Descriptors: *CALIFORNIUM 252 -- NEUTRON EMISSION; *CALIFORNIUM 252 -- PHOTON EMISSION; *CALIFORNIUM 252 -- THERAPEUTIC USES; *NEOPLASMS -- NEUTRON THERAPY
Descriptors: ALPHA PARTICLES; DATA ANALYSIS; DOSE RATES; GAMMA RADIATION; OXYGEN ENHANCEMENT RATIO; RBE
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; CALIFORNIUM ISOTOPES; CHARGED PARTICLES; DISEASES; ELECTROMAGNETIC RADIATION; EMISSION; EVEN-EVEN NUCLEI; HEAVY NUCLEI; IONIZING RADIATIONS; ISOTOPES; MEDICINE; NUCLEAR MEDICINE; NUCLEI; RADIATIONS; RADIOISOTOPES; RADIOLOGY; RADIOTHERAPY; THERAPY; USES; YEARS LIVING RADIOISOTOPES
Subject Categories: 550603* -- Medicine -- External Radiation in Therapy -- (1980-)
550604 -- Medicine -- Unsealed Radionuclides in Therapy -- (1980-)
INIS Subject Categories: C6300* -- External Radiation in Therapy
C6400 -- Radioisotopes in Therapy

10/5/477 (Item 177 from file: 103)
01920936 EDB-87-048590
Author(s): Zirkind, R.
Title: Operation Hardtack. Project 8.5A. Narrow-band infrared spectral irradiance of high-altitude bursts
Corporate Source: Bureau of Naval Weapons, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 21
Report Number(s): AD-A-995450/4/XAB
Note: Extracted version of Report dated 26 Dec 1961
Document Type: Report
Language: English
Journal Announcement: ERA8703
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this project was to obtain basic data in the infrared region of approximately 1.7 to 13 ..mu.. from high-altitude nuclear detonations at an airborne station. More specifically, the objectives were to determine (1) the spectral distribution of the irradiance, particularly at late times on the order of a minute after detonation, and (2) the size and shape of the infrared fireball as a function of wavelength, in several spectral bands, and time. For correlation purposes, a megaton-range shot detonated at sea level was to be documented. Classified material has been removed in order to make the information available on an unclassified, open publication basis, to any interested parties. The effort to declassify this report has been accomplished specifically to support the Department of Defense Nuclear Test Personnel Review (NTPR) Program. The objective is to facilitate studies of the low levels of radiation received by some individuals during the atmospheric nuclear test program by making as much information as possible available to all interested parties.
Major Descriptors: *HARDTACK PROJECT -- RADIATION MONITORS; *NUCLEAR EXPLOSIONS -- HARDTACK PROJECT
Descriptors: ATMOSPHERIC EXPLOSIONS; FIREBALLS; INFRARED RADIATION; RADIATION DOSES
Broader Terms: DOSES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; MEASURING INSTRUMENTS; MONITORS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/478 (Item 178 from file: 103)
01906697 INS-87-006037; ERA-12-014452; EDB-87-034348
Title: Serologic markers for hepatitis B among Marshallese accidentally exposed to fallout radiation in 1954
Author(s): Adams, W.H.; Fields, H.A.; Engle, J.R.; Hadler, S.C.
Affiliation: Brookhaven National Lab., Upton, NY

Publication Date: Oct 1986 p 74-79
Document Type: Journal Article
Language: English
Journal Announcement: EDB8701
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input). NLM (National Library of Medicine)
Country of Origin: United States
Abstract: At least one serologic marker of prior hepatitis B infection (hepatitis B surface antigen, antibody to surface antigen, or antibody to core antigen) was found in 91.7% of 314 Marshallese tested. The prevalence of hepatitis B surface antigenemia (3.3%) in a subpopulation that had resided on Rongelap Atoll at the time of accidental exposure to radioactive fallout from a thermonuclear test in 1954 did not differ significantly from the prevalence in a selected unexposed population (10.5%).
Major Descriptors: *HEPATITIS -- IMMUNE REACTIONS; *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS; *HUMAN POPULATIONS -- IMMUNOLOGY
Descriptors: ANTIBODIES; ANTIGENS; BLOOD SERUM; FALLOUT; MARSHALL ISLANDS; RADIATION INJURIES; THERMONUCLEAR EXPLOSIONS
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DIGESTIVE SYSTEM DISEASES; DISEASES; EXPLOSIONS; INJURIES; ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; POPULATIONS; RADIATION EFFECTS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/479 (Item 179 from file: 103)
01897136 ERA-12-012225; EDB-87-024784
Author(s): Felty, J.R.
Title: Numerical method for unfolding the stabilized nuclear-cloud particle distribution. Master's thesis
Corporate Source: Air Force Inst. of Tech., Wright-Patterson AFB, OH (USA). School of Engineering
Publication Date: Mar 1986 p 130
Report Number(s): AD-A-172960/7/XAB; AFIT/GNE/PH-86M-4
Document Type: Report
Language: English
Journal Announcement: EDB8701
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: A numerical unfolding of particle-size distribution from reduced airborne filter sample data is developed. First, stabilized nuclear cloud is modeled using a trial particle-size distribution that is positioned in the atmosphere by empirical relationships. Then Davies-McDonald fall mechanics are used to model the falling particles in the cloud. The amount of mass at each sample altitude at each sample time is calculated from the cloud model and compared to the amount of mass found in actual cloud samples. When the calculated masses equal the actual masses, the particle distribution used to construct the stabilized cloud is the correct one. A computer code for this numerical analysis is tested using hypothetical filter sample data constructed from a known particle-size distribution. An input parameter sensitivity analysis is also conducted. Actual nuclear cloud sample data from the Redwing series ZUNI shot is analyzed using this numerical method of airborne nuclear cloud sample analysis. The outcome of the ZUNI sample analysis is somewhat inconclusive in that it does not pinpoint a distribution. However, results of the model sensitivity analysis indicate that the particle size distribution of the stabilized ZUNI cloud may be lognormal with a log-slope between 2.9 and 3.9.
Major Descriptors: *NUCLEAR EXPLOSIONS -- FALLOUT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS -- PARTICLE SIZE; *REDWING PROJECT -- RADIOACTIVE CLOUDS

; SENSITIVITY; STABILITY
Broader Terms: CLOUDS; EQUIPMENT; EXPLOSIONS; FILTERS; MATHEMATICS; POLLUTION CONTROL EQUIPMENT; SIZE
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/480 (Item 180 from file: 103)
01890606 IFI-86-005603; EDB-87-018248
Title: Cancer of the thyroid and salivary glands
Author(s): Ezaki, H.; Hayashi, Y.; Ishimaru,; Takeichi, N.; Shigematsu, I.; Kagan, A.
Affiliation: Radiation Effects Research Foundation, Hiroshima
Title: Cancer in atomic bomb survivors
Publisher: Plenum Press,New York, NY
Publication Date: 1986 p 129-142
Document Type: Analytic of a Book
Language: English
Journal Announcement: INS8701
Subfile: INS (US Atomindex input). IFI (Claims/U.S. Patent Abstracts)
Country of Origin: Japan
Country of Publication: United States
Abstract: The relationship of atomic bomb exposure to tumors of the head and neck has been studied in detail for the thyroid and salivary gland. It has been deomonstrated by animal experiments and studies conducted on those undergoing radiation therapy of the neck during childhood, and on those exposed to radioactive fallout from hydrogen-bomb tests in the Marshall Islands, that thyroid neoplasms can be induced by radiation. Although it was assumed that radiation would ahve a similar effect on the salivary gland located near the thyroid gland, it was in the 1970s that studies were commenced on the salivary gland. A study of the Adult Health Study population presented data which show that the incidence of salivary gland tumors was 9.3-fold higher in the group exposed to 300+ rad than in the control group and when confined only to malignant tumors the incidence was 21.8-fold higher.
Major Descriptors: *A-BOMB SURVIVORS -- DELAYED RADIATION EFFECTS; *ADULTS -- DELAYED RADIATION EFFECTS; *SALIVARY GLANDS -- CARCINOGENESIS; *SALIVARY GLANDS -- DISEASE INCIDENCE; *THYROID -- CARCINOGENESIS; *THYROID -- DISEASE INCIDENCE
Descriptors: COMPARATIVE EVALUATIONS; DOSE-RESPONSE RELATIONSHIPS; EPIDEMIOLOGY; EXPERIMENTAL NEOPLASMS; FALLOUT; MARSHALL ISLANDS; NEOPLASMS; NUCLEAR EXPLOSIONS; RADIOTHERAPY
Broader Terms: AGE GROUPS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS ; BODY; DISEASES; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; HUMAN POPULATIONS; ISLANDS; MEDICINE; MICRONESIA; NUCLEAR MEDICINE; OCEANIA; ORGANS; PATHOGENESIS; POPULATIONS; RADIATION EFFECTS; RADIOLOGY; THERAPY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man

10/5/481 (Item 181 from file: 103)
01877627 ERA-12-007266; EDB-87-005260
Author(s): Allen, P.W.
Title: Operation Ivy. Project 7.5. Dispersion of gaseous debris from nuclear explosions
Corporate Source: Department of the Air Force, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 26
Report Number(s): AD-A-995448/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8612
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This project was designed to provide information for the solution

5003776

cloud dimensions. Observations indicated that the major portion of the Mike cloud entered the stratosphere - the cloud top reached 120,000 feet with the mushroom base at about 67,000 feet. The tropopause height at the time of the detonation was about 58,000 feet. The top of the King cloud reached about 74,000 feet with the mushroom base at about 40,000 feet. Samples for the measurement of the world-wide distribution of induced gaseous activity (tritium and carbon-14) were taken at widely separated geographical positions, including both northern and southern hemisphere points. These samples were periodically collected at each location over a period of six months following the detonations.
Major Descriptors: *IVY PROJECT; *NUCLEAR EXPLOSIONS -- FALLOUT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS -- ATMOSPHERIC CIRCULATION
Descriptors: AIR; ATMOSPHERIC EXPLOSIONS; CARBON; CARBON 14; CARBON DIOXIDE ; DIFFUSION; RAIN; SAMPLING; STRATOSPHERE; TRITIUM; TROPOPAUSE; WATER VAPOR
Broader Terms: ATMOSPHERIC PRECIPITATIONS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CARBON COMPOUNDS; CARBON ISOTOPES; CARBON OXIDES; CHALCOGENIDES; CLOUDS; EARTH ATMOSPHERE; ELEMENTS; EVEN-EVEN NUCLEI; EXPLOSIONS; FLUIDS; GASES; HYDROGEN ISOTOPES; ISOTOPES; LIGHT NUCLEI; NONMETALS; NUCLEAR EXPLOSIONS; NUCLEI; ODD-EVEN NUCLEI; OXIDES; OXYGEN COMPOUNDS; RADIOISOTOPES; TROPOSPHERE; VAPORS; YEARS LIVING RADIOISOTOPES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/482 (Item 182 from file: 103)
01877626 ERA-12-007265; EDB-87-005259
Author(s): Gibson, H.F.; Miller; Motz, J.W.; Smeltzer, J.C.; Wyckoff, H.O.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 1.2. Delayed gamma-ray measurements. Part 1. Gamma-ray spectrum measurements (abridged)
Corporate Source: National Bureau of Standards, Washington, DC (USA). Radiation Physics Div.
Publication Date: 1 Sep 1985 p 59
Report Number(s): AD-A-995447/0/XAB
Note: Extracted version of report dated Apr 52. See also Annex 1.2, Part 4, AD-A995 420; Availability: Microfiche copies only
Document Type: Report
Language: English
Journal Announcement: EDB8612
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Measurements of bomb efficiencies from the number of gamma rays requires fundamentally two separate experiments. The average number of gamma rays emitted from the fission fragments (delayed gamma rays) per fission must be determined. This experiment can be carried out in the laboratory. A second experiment, the absolute determination of the number of gamma rays from the bomb was also attempted. Because gamma rays are not directly observable but are measurable only through their secondary effects, and because the probability of occurrence of the secondary effects depends upon the gamma ray energy, it is not usually possible to count directly the number of gamma rays in a heterochromatic spectrum. A spectral distribution must be first obtained from which the actual total number of gamma rays may be computed. This volume discusses, in detail, the planning for the experiment and the spectral distribution of collimated gamma-rays determined from the Greenhouse tests on two shots. A discussion of measurement of build-up factor which is needed to estimate the effect of collimation is also given.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- DELAYED GAMMA RADIATION; *NUCLEAR EXPLOSIONS -- GAMMA SPECTRA

SPECTROMETERS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; FUNCTIONS; GAMMA RADIATION; IONIZING RADIATIONS; ISOTOPES; MATERIALS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RADIATIONS; RADIOACTIVE MATERIALS; SPECTRA; SPECTROMETERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/483 (Item 183 from file: 103)
01877625 ERA-12-005151; EDB-87-005258
Author(s): Clarkson, P.
Title: Headquarters Joint Task Force Seven. Operation plan number 3-53
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 10 Feb 1954 p 124
Report Number(s): AD-A-995446/2/XAB
Note: Includes change no. 1
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This operation plan covers the period of operations from the time major elements of the joint task force are deployed in the forward area until the completion of on-site operations. It was published for planning purposes only, always subject to periodic revision and refinement as more detailed information became available. ENIWETOK-BIKINI Danger Area, as the term is used in this plan, is that area encompassing ENIWETOK and BIKINI ATOLLS and bounded by the meridians 160 deg 35' - 166 deg 16' east longitude, and by the parallels 10 deg 15' - 12 deg 45' north latitude (an area of 150 by 350 miles).
Major Descriptors: *BIKINI -- NUCLEAR EXPLOSIONS; *ENIWETOK -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- PLANNING; *NUCLEAR WEAPONS -- TESTING
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/484 (Item 184 from file: 103)
01877624 ERA-12-005150; EDB-87-005257
Title: Operation Sandstone. Nuclear explosions. 1948. Technical report of the communications and Electronics Section of the Special Staff of the Commander. Sandstone report No. 44
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 388
Report Number(s): AD-A-995445/4/XAB
Note: Availability: Microfiche copies only
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A17/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *CABLES -- BLAST EFFECTS; *ELECTRONIC EQUIPMENT -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- PHYSICAL RADIATION EFFECTS; *SANDSTONE PROJECT
Descriptors: UNDERWATER
Broader Terms: EQUIPMENT; EXPLOSIONS; LEVELS; NUCLEAR EXPLOSIONS; RADIATION EFFECTS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear --

10/5/485 (Item 185 from file: 103)
01877623 ERA-12-005149; EDB-87-005256
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapons tests. Annex 6. Part 2. Section 1. Blast resistance of structures -- Bureau of Yards and Docks (Service Test Number 4). Sandstone report no. 25
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 266
Report Number(s): AD-A-995444/7/XAB
Note: Availability: Microfiche copies only
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A12/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this test program was to study the resistance of units of varying material, shape, and strength in relation to atomic blast forces of varying magnitude. This test was conducted on a model basis, with the intent to coordinate results with theoretical analyses and dynamic resistance studies to form a reasonable basis for the design of blast-resistant structures.
Major Descriptors: *BUILDING MATERIALS -- BLAST EFFECTS; *MECHANICAL STRUCTURES -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *SANDSTONE PROJECT
Descriptors: REINFORCED CONCRETE; WALLS; WOOD
Broader Terms: BUILDING MATERIALS; CONCRETES; EXPLOSIONS; MATERIALS; NUCLEAR EXPLOSIONS; REINFORCED MATERIALS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/486 (Item 186 from file: 103)
01877622 ERA-12-005148; EDB-87-005255
Author(s): Wayne, J.C.; Lehmkuhl, J.C.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 8.1. Blast effects on aircraft in flight
Corporate Source: Air Force Wright Air Development Center, Wright-Patterson AFB, OH (USA)
Publication Date: 1 Sep 1985 p 287
Report Number(s): AD-A-995424/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A13/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The primary objective of this report is to present data concerning the structural and aerodynamic loads as measured on various types of aircraft in flight in the vicinity of an atomic explosion. A secondary objective is to describe the instrumentation (installation, calibration, and operation) in order to provide for the future planning and conduct of similar tests. The positions of the airplanes at the time of shock arrival were accurately determined by means of radar tracking. The measured data were correlated, every second, from a land-based radio-transmitter station and with reference to time zero by means of a photoelectric cell. The data obtained are believed to be accurate to within 10% and is suitable or further analysis and satisfactory for the development or correction of a technique for calculating the effects of atomic explosions on aircraft structures.
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: CALIBRATION; DATA ACQUISITION; RADAR; SHOCK WAVES

FINDERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/487 (Item 187 from file: 103)
01877621 ERA-12-005147; EDB-87-005254
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 8.3. Special radar, radio, and photographic studies of weapons effects. Part 1, 2, 3, and 4
Corporate Source: Air Force Wright Air Development Center, Wright-Patterson AFB, OH (USA)
Publication Date: 1 Sep 1985 p 373
Report Number(s): AD-A-995423/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A16/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Contents include: Part 1--radar-scope photography; Part 2--effects of atomic detonation on radio propagation; Part 3; photographic assessment of bomb damage; Part 4--film fogging studies.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- PHOTOGRAPHY; *NUCLEAR EXPLOSIONS -- PHYSICAL RADIATION EFFECTS
Descriptors: DAMAGE
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; RADIATION EFFECTS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/488 (Item 188 from file: 103)
01877620 ERA-12-005146; EDB-87-005253
Title: Operation Hardtack. Report to the Scientific Director. Report of the Commander, Task Group 7.1
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 130
Report Number(s): AD-A-995422/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report gives a summary of the experimental programs carried out during Operation Hardtack. These experiments were designed to determine nuclear weapons effects and help to explain nuclear weapons phenomenology.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- PHYSICAL RADIATION EFFECTS
Descriptors: NUCLEAR WEAPONS; REVIEWS; THERMAL RADIATION
Broader Terms: DOCUMENT TYPES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; RADIATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/489 (Item 189 from file: 103)
01877618 ERA-12-005144; EDB-87-005251
Author(s): Julian, A.; Eves, C.E.
Title: Operation Redwing. Project 8.4. Thermal effects on strength of aircraft structural sandwich-type panels
Corporate Source: Cook Research Labs., Skokie, IL (USA)
Publication Date: 1 Sep 1985 p 56
Report Number(s): AD-A-995417/3/XAB
Document Type: Report

Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: In this test, panels of varied construction materials and facing thickness were subject to transient heat pulses in unloaded and prestressed conditions to determine if any change in structural integrity could be noted. Initial specimens were instrumented for measurement of temperature-time history at the core-to-facing bond and exposed to thermal radiation. Results of comparative post-exposure mechanical tests on field-exposed, aluminum facing samples showed no noteworthy change in strength characteristics as a result of the radiant exposure. However, tests conducted on similiar specimens pulse-heated in a restrained and prestressed condition showed that failure will occur at temperatures well within the range of that developed in the field-exposed specimens. Initial results of the loads program showed that 0.020-inch aluminum facing on balsa-core specimens will fail at temperature rises of approximately 200 F when subjected to relatively low stresses during the heating cycle. As the result of a complete study of the heat-transfer characteristics of sandwich construction, a mathematical formulation was derived. When these formulas were programmed for digital computer use, accurate results were obtained. The program could be used with confidence to predict thermal response to heat pulses from nuclear weapons or laboratory heat sources, and could also be used in establishing material criteria for sandwich structures having superior thermal tolerance.
Major Descriptors: *AIRCRAFT COMPONENTS -- THERMAL STRESSES; *MECHANICAL STRUCTURES -- THERMAL STRESSES; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *REDWING PROJECT
Descriptors: BONDING; HEAT TRANSFER; MATHEMATICAL MODELS; THICKNESS
Broader Terms: DIMENSIONS; ELECTROMAGNETIC RADIATION; ENERGY TRANSFER; EXPLOSIONS; FABRICATION; JOINING; RADIATIONS; STRESSES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/490 (Item 190 from file: 103)
01877617 ERA-12-005143; EDB-87-005250
Author(s): Wells, H.M.; Roha, D.M.; Sallis, D.V.; Ward, J.V.
Title: Operation Redwing. Project 5.4. In-flight participation of a B-57B
Corporate Source: Air Force Wright Air Development Center, Wright-Patterson AFB, OH (USA)
Publication Date: 1 Sep 1985 p 62
Report Number(s): AD-A-995416/5/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This project was establihsed to determine the response of the structure of the B-57 aircraft in flight to thermal, gust, and overpressure effects of large-yield nuclear explosions primarily for the purpose of defining the delivery capabilities of the aircraft and secondarily to obtain basic information relative to the thermoelastic response of the aircraft structure. In order to obtain the necessary data, the aircraft was instrumented to measure the overpressure, gust, and thermal inputs, and the response of various components of the structure to these inputs. The instrumented aircraft was positioned at predetermined points such that design limits would be approached. A maximum skin temperature of 400 F was the criterion for determination of the amount of thermal radiation which the B-57B could absorb without sustaining permanent buckling of the skin, and 600 F was the criterion for the maximum safe limit. With respect to gust, the aircraft was

aircraft experienced loads of from 14 to approximately 61% of the design limit load. During Shot Apache, the aircraft was positioned for both overpressure and a high horizontal gust component. The results substantiated the theoretical alleviating effect of the horizontal gust component.
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *REDWING PROJECT; *THERMAL RADIATION -- PHYSICAL RADIATION EFFECTS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; RADIATION EFFECTS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/491 (Item 191 from file: 103)
01877616 ERA-12-005142; EDB-87-005249
Author(s): Laumann, R.C.; Gran, W.M.; Heineman, R.H.; Lang, R.P.
Title: Operation Redwing. Project 5.1. Thermal and blast load effects on a B-47E aircraft in flight
Corporate Source: Cook Research Labs., Morton Grove, IL (USA)
Publication Date: 1 Sep 1985 p 71
Report Number(s): AD-A-995415/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This project was established to measure overpressure, gust, and thermal effects on a B-47E aircraft in flight and to provide additional research information on the effects of nuclear explosions on the aircraft. A B-47E aircraft was instrumented for measurement of overpressures, irradiance, radiant exposure, and of bending, shear, and torsion in the wing and stabilizer. Further instrumentation was made to measure thermal strain and the effect of high thermal inputs upon thin skins and supporting structures. Instrumentation was also installed to obtain bending, shear, and torsion responses of the fuselage when subjected to combined side and vertical loading. The general positioning criteria for the aircraft were wing bending up to 95% of design limit and/or a temperature rise of 600 to +700F in the thin-skinned elevator and aileron. In order to attain high temperature rises on participations in which the aircraft was gust critical, it was necessary to paint the thin-skin surfaces with high absorptivity paint. The data obtained in these tests were to be used in the design of future USAF aircraft.
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *REDWING PROJECT; *THERMAL RADIATION -- PHYSICAL RADIATION EFFECTS
Descriptors: BENDING
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; RADIATION EFFECTS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/492 (Item 192 from file: 103)
01877615 ERA-12-005141; EDB-87-005248
Author(s): Fixott, R.; Pickering, J.E.; Williams, D.B.; Brown, D.V.L.; Rose, H.W.
Title: Operation Redwing. Project 4.1. Chorioretinal burns
Corporate Source: School of Aviation Medicine, Randolph AFB, TX (USA)
Publication Date: 1 Sep 1985 p 43
Report Number(s): AD-A-995414/0/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611

Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This Redwing project was designed to furnish supplemental information on the requirements for protection against retinal burns, using both rabbits and monkeys as experimental animals. Chorioretinal burns were produced by various segments of the thermal pulse. This was accomplished by two series of time-fractionating shutters. The first group, the early closing shutters, were open at time zero and closed at increasing intervals of time. The second series, the delayed-opening shutters, were closed at time zero and subsequently opened for preselected time increments during the flash. The feasibility of protection by fixed-density optical filters was explored. Two types of protective electronic shutters were field tested. Additional objectives were to: (1) determine whether blink reflexes would prevent chorioretinal burns; (2) ascertain which portions of the time-intensity pulse can produce thermal injury to the retina and choroid of the eye; (3) determine the time required for blink reflex in rabbits and monkeys exposed to the extreme light intensity of the nuclear detonations; (4) explore the feasibility of ocular protection by means of fixed-density optical filters or combinations of filters; and (5) tests, under field conditions, protective shutter devices that are in the developmental state and are designed to close more rapidly than the blink reflex.
Major Descriptors: *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *REDWING PROJECT; *RETINA -- RADIATION BURNS; *THERMAL RADIATION -- RADIATION BURNS
Descriptors: MONKEYS; OPTICAL FILTERS; RABBITS
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; BODY AREAS; BURNS; ELECTROMAGNETIC RADIATION; EXPLOSIONS; EYES; FACE; FILTERS; HEAD; INJURIES; LOCAL RADIATION EFFECTS; MAMMALS; ORGANS ; PRIMATES; RADIATION EFFECTS; RADIATION INJURIES; RADIATIONS; SENSE ORGANS; VERTEBRATES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560400 -- Other Environmental Pollutant Effects

10/5/493 (Item 193 from file: 103)
01877614 ERA-12-005140; EDB-87-005247
Author(s): Sinnamon, G.K.; Haltiwanger, J.D.; Newmark, N.M.
Title: Operation Redwing. Project 3.1. Effect of length of positive phase of blast on drag-type and semidrag-time industrial buildings
Corporate Source: Illinois Univ., Urbana (USA)
Publication Date: 1 Sep 1985 p 90
Report Number(s): AD-A-995413/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The primary objective of the project was to obtain information regarding the effect of the length of the positive phase of blast on the response of drag and semidrag structures. A total of six steel-frame buildings were tested during this operation. The structure of each type nearest ground zero was located such that if the yield of the weapon was near the lower limit of its predicted range, it would probably undergo considerable inelastic deformation. Conversely, those structures farthest from ground zero were located such that if the yield of the nuclear device was near the upper limit of its predicted range, they would be substantially deformed, but would not collapse. The third building of each type was located at an intermediate point between these two extremes. Instrumentation was provided to obtain records of the transient structural deflections, strains, and accelerations, as well as of overpressure and dynamic pressure versus

Major Descriptors: *BUILDINGS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *REDWING PROJECT
Descriptors: DEFORMATION; DRAG; DYNAMIC LOADS; SHOCK TUBES; TRANSIENTS
Broader Terms: EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/494 (Item 194 from file: 103)
01877613 ERA-12-005139; EDB-87-005246
Author(s): Cowan, M.
Title: Operation Redwing. Project 2.52. Neutron-induced soil radioactivity
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: 1 Sep 1985 p 20
Report Number(s): AD-A-995412/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Soil samples were exposed to neutron radiation from Shot Cherokee to help establish the importance of neutron-induced residual gamma radiation. After exposure and recovery, the samples had no detectable activity because the slant range to the nearest sample was nearly 3.5 miles, due to an error in bomb drop. After this failure, an experiment was designed in the field for Shot Yuma in order that induced-activity data could be obtained for a soil other than Nevada Test Site soil. Samples of sodium, manganese, and coral sand from Site Sally were exposed above and below the surface at a slant range of 120 yards. The difference between the effects of pure fission and fission-fusion neutron spectra on induced activity in soil was not measured, since the soil samples on Shot Cehrokee were not activated. However, a method for predicting neutron-induced gamma-radiation intensities was tested for coral soil on Shot Yuma. Predicted values were within + or - 50% of induced dose rates inferred from field measurements.
Major Descriptors: *NUCLEAR EXPLOSIONS -- NEUTRON SPECTRA; *REDWING PROJECT ; *SOILS -- RADIOACTIVITY
Descriptors: GAMMA RADIATION
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; RADIATIONS; SPECTRA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/495 (Item 195 from file: 103)
01877612 ERA-12-005138; EDB-87-005245
Author(s): Broyles, C.D.
Title: Operation Redwing. Project 1.10. Blast over vegetated and cleared areas
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: 1 Sep 1985 p 20
Report Number(s): AD-A-995411/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Measurements were made to determine the difference in blast effects over a surface covered with low shrubs and grass and over a cleared sandy surface in the precursor region, and an attempt was made to correlate this difference with measurements of preshock sound speed over the surface. Overpressure was measured with ground-baffle gages and with pivot-static gages at 3-foot elevations. Dynamic pressures

were made at the same ground ranges for vegetated surface as for the sandy surface. The vegetation reduced the severity of the precursor, showing later arrival times and smaller dynamic pressures than over the cleared area. The overpressures over the vegetation were the same at the ground and 3-foot levels. No measurements of sound speed after zero time were obtained, so a correlation is not possible.
Major Descriptors: *GRASS -- PRESSURE EFFECTS; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *REDWING PROJECT; *SAND -- PRESSURE EFFECTS; *SHOCK WAVES -- PRESSURE MEASUREMENT; *SHRUBS -- PRESSURE EFFECTS
Broader Terms: EXPLOSIONS; PLANTS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/496 (Item 196 from file: 103)
01877610 ERA-12-005137; EDB-87-005243
Title: Operation Castle. Radiological Safety. Volume 2. Final report
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 343
Report Number(s): AD-A-995409/0/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A15/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report is designed to cover the overall Operation Castle radiological safety matters from the viewpoint of those issues of direct concern to Headquarters, Joint Task Force Seven. It was written for the express purpose of assisting in the development of future radiological safety plans by presenting detailed discussion of the problems and solutions arising during Operation Castle.
Major Descriptors: *CASTLE PROJECT; *FALLOUT -- RADIATION HAZARDS; *NUCLEAR EXPLOSIONS -- FALLOUT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE MATERIALS; *RADIOACTIVE MATERIALS -- RADIATION HAZARDS
Descriptors: FORECASTING; MANAGEMENT; SAFETY
Broader Terms: EXPLOSIONS; HAZARDS; HEALTH HAZARDS; MATERIALS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/497 (Item 197 from file: 103)
01877609 ERA-12-005136; EDB-87-005242
Title: Operation Castle. Radiological Safety. Volume 1. Final report
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 296
Report Number(s): AD-A-995408/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A13/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report is designed to cover the overall Operation Castle radiological safety matters from the viewpoint of those issues of direct concern to Headquarters, Joint Task Force Seven. It was written for the express purpose of assisting in the development of future radiological safety plans by presenting detailed discussion of the problems and solutions arising during Operation Castle. Included is a discussion of fallout forecasting techniques.
Major Descriptors: *CASTLE PROJECT; *FALLOUT -- FORECASTING; *FALLOUT -- RADIATION HAZARDS; *NUCLEAR EXPLOSIONS -- FALLOUT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS -- RADIATION HAZARDS
Descriptors: MANAGEMENT; MARSHALL ISLANDS; RADIOACTIVE MATERIALS; SAFETY;

Broader Terms: CLOUDS; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; ISLANDS; MATERIALS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/498 (Item 198 from file: 103)
01877608 ERA-12-005135; EDB-87-005241
Author(s): Seacord, D.F.
Title: Operation Ivy. Project 6.2. Report to the Scientific Director. Blast-wave mass-motion measurements
Corporate Source: Los Alamos National Lab., NM (USA)
Publication Date: 1 Sep 1985 p 52
Report Number(s): AD-A-995407/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: OPERATION IVY was instrumented for the mass-motion method of pressure measurement in a manner similar to that used on OPERATIONS BUSTER-JANGLE and TUMBLER-SNAPPER. Low-altitude pyrotechnic mortar bursts and high-altitude gun bursts (on Mike only) labeled the air for photographic recording. The methods of instrumentation are described, the method of data analysis is outlined and derived data on time of arrival, peak material velocity, peak shock velocity, and peak overpressure are presented in tabular and graphical form. Appendixes present meteorological and ballistic data and calculations. An outstanding conclusion of the experiment is the lowness of peak overpressures near the surface compared with the peak overpressures at altitudes up to 25,000 feet because of the effect of atmospheric inhomogeneity at long ranges. The mass-motion technique offers a useful diagnostic tool for the determination of total hydrodynamic yield.
Major Descriptors: *IVY PROJECT; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SHOCK WAVES -- PRESSURE MEASUREMENT
Descriptors: ALTITUDE; HYDRODYNAMICS; MASS; MOTION; VELOCITY
Broader Terms: EXPLOSIONS; FLUID MECHANICS; MECHANICS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/499 (Item 199 from file: 103)
01877607 ERA-12-005134; EDB-87-005240
Author(s): Gaylord, J.L.
Title: Operation Ivy. Report to the Scientific Director. Documentary photography
Corporate Source: Lookout Mountain Lab., Los Angeles, CA (USA)
Publication Date: 1 Sep 1985 p 66
Report Number(s): AD-A-995406/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of Task Unit 9 was to record on film, both still and motion picture, the activities connected with certain events and programs of Operation Ivy. Task Unit 9 accomplished all the necessary field photography and was still in the process of editing this footage to form a completed motion-picture record at the time this report was written.
Major Descriptors: *IVY PROJECT; *NUCLEAR EXPLOSIONS -- PHOTOGRAPHY
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear --

10/5/500 (Item 200 from file: 103)
01877606 ERA-12-005133; EDB-87-005239
Author(s): Anderson, E.C.; Benson; Brennan, J.T.; Chambers, F.W.; Conger
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 2.4. Experimental data obtained in the field. Part 1. Dosimetry using mice. Part 2. Depth dosimetry of unit-density materials. Part 3. Biological dosimetry of atomic bombs, using Tradescantia
Corporate Source: Rochester Univ., NY (USA)
Publication Date: 1 Sep 1985 p 121
Report Number(s): AD-A-995405/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Topics include: The Biological Effectiveness of Neutron Radiation from an Atomic Bomb; Radiation Hazards Associated with Passage Through an Atomic Bomb Cloud.
Major Descriptors: *GREENHOUSE PROJECT; *NEUTRON DOSIMETRY -- MEASURING METHODS; *NUCLEAR EXPLOSIONS -- NEUTRON DOSIMETRY; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS
Descriptors: MICE; RADIATION EFFECTS; SPLEEN; THYMUS; TRADESCANTIA
Broader Terms: ANIMALS; BODY; CLOUDS; DOSIMETRY; EXPLOSIONS; LYMPHATIC SYSTEM; MAMMALS; NUCLEAR EXPLOSIONS; ORGANS; PLANTS; RODENTS; VERTEBRATES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/501 (Item 201 from file: 103)
01877605 ERA-12-005132; EDB-87-005238
Author(s): Pearse, H.E.; Kingsley, H.D.; Schilling, J.A.; Hogg; Blakney, R.M.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 2.7. Thermal radiation injury
Corporate Source: Rochester Univ., NY (USA)
Publication Date: 1 Sep 1985 p 77
Report Number(s): AD-A-995404/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Information concerning the flash burn resulting from an atomic bomb explosion was necessary to understand the lesion, its systematic effects, and prevention and treatment of these effects. In order to reproduce similar sources in the laboratory, it was essential to know the characteristics of the energy producing the biological effect. In order to obtain this information, anesthetized experimental animals were placed in shielded positions at varying distances from bomb zero to cover a wide range of thermal-radiation intensities. Small areas of each animal's skin were exposed through aperture plates which were designed to analyze burn production as a function of time, intensity, and spectrum. Protection of the animal by fabrics covering the skin was also evaluated. Following exposure, animals were retrieved from the exposure stations and transported to a laboratory for analysis of the burn lesions by description, color photography, and microscopic study of biopsy materials.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- THERMAL

*THERMAL RADIATION -- RADIATION INJURIES
Descriptors: BIOPSY; DOGS; INJURIES; RADIATION PROTECTION; SWINE
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BURNS; DIAGNOSTIC TECHNIQUES; DOMESTIC ANIMALS; ELECTROMAGNETIC RADIATION; EXPLOSIONS; INJURIES; MAMMALS; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; RADIATIONS; VERTEBRATES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/502 (Item 202 from file: 103)
01877604 ERA-12-005131; EDB-87-005237
Author(s): Grier, H.E.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 1.11. Timing and firing and fiducial markers
Corporate Source: Edgerton, Germeshausen and Grier, Inc., Boston, MA (USA)
Publication Date: 1 Sep 1985 p 53
Report Number(s): AD-A-995403/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: An automatic remote-control system armed and fired the bomb and sent out a sequence of time signals to experimental equipment on the atoll. A central station at Parry Island sent signals via submarine cables to a timer station on a shot island. The timer station controlled signals to the zero station and to experiments on the island, and through auxiliary stations, it also controlled signal distribution on adjacent islands. Light-sensitive triggering units for apparatus and for accurate standard zero-time reference were provided in the form of Blue Boxes, or fiducial markers.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- TIMING CIRCUITS; *NUCLEAR EXPLOSIONS -- TRIGGER CIRCUITS; *TIMING CIRCUITS -- REMOTE CONTROL; *TRIGGER CIRCUITS -- REMOTE CONTROL
Broader Terms: CONTROL; ELECTRONIC CIRCUITS; EXPLOSIONS; NUCLEAR EXPLOSIONS ; PULSE CIRCUITS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/503 (Item 203 from file: 103)
01877603 ERA-12-005130; EDB-87-005236
Author(s): Grier, H.E.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 1.9. Air-drop instrumentation. Part 2. Teller-alpha
Corporate Source: Johns Hopkins Univ., Laurel, MD (USA). Applied Physics Lab.
Publication Date: 1 Sep 1985 p 29
Report Number(s): AD-A-995402/5/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: It was the purpose of the Teller-Alpha experiment to measure the coefficient alpha by means of detectors placed a long distance from the bomb. The detectors are photoelectric devices that respond to visible light produced in the air surrounding the bomb by the absorbed gamma rays. A measurement of this sort was proposed by Edward Teller prior to

equipment were the photohead, the 200-mc timing oscillator, and the high-speed-sensitivity recoding oscilloscope. A complete discussion of the experiment is provided.
Major Descriptors: *AIR -- VISIBLE SPECTRA; *GAMMA RADIATION -- ABSORPTION; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- PHOTON EMISSION
Descriptors: OSCILLATORS; TOWERS
Broader Terms: ELECTROMAGNETIC RADIATION; ELECTRONIC EQUIPMENT; EMISSION; EQUIPMENT; EXPLOSIONS; FLUIDS; GASES; IONIZING RADIATIONS; MECHANICAL STRUCTURES; NUCLEAR EXPLOSIONS; RADIATIONS; SPECTRA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/504 (Item 204 from file: 103)
01877602 ERA-12-005129; EDB-87-005235
Author(s): Price, J.F.; Sokol, G.M.; Anastasion, S.N.; Vader, R.L.; Walthall, E.R.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 1.6. Blast measurements. Part 4. Pressure-time measurements in the Mach region. Sections 1 and 2
Corporate Source: Naval Ordnance Lab., White Oak, MD (USA)
Publication Date: 1 Sep 1985 p 127
Report Number(s): AD-A-995401/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of the laboratory and field work described in this report was to make accurate measurements of air blast in the Mach region from two explosions of Operation Greenhouse. Measurements were made at constant height along a single radius on Test Dog and along two different radii for test Easy. In addition, diaphragm-type inductance gages were installed at five different heights on approximately the same radii on test Easy. The spring-piston gage successfully did the job it was designed to do. The diaphragm-type inductance-gage measuring system had an accuracy of 2% in pressure and a resolving time of approximately 1 musec. Complete details concerning equipment design, field operation, and recommendations for future use of the systems are presented.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SHOCK WAVES -- PRESSURE MEASUREMENT
Descriptors: PRESSURE GAGES
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/505 (Item 205 from file: 103)
01877601 ERA-12-005128; EDB-87-005234
Author(s): Frolich, A.J.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 1.6. Blast measurements. Part 2. Free-air peak-pressure measurements. Section 2. Telemetering from moored balloons
Corporate Source: Johns Hopkins Univ., Laurel, MD (USA). Applied Physics Lab.
Publication Date: 1 Sep 1985 p 145
Report Number(s): AD-A-995400/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)

Country of Publication: United States
Abstract: The purpose of this experiment was to determine the free-air peak-pressure as a function of distance from an atomic explosion. In this report, free-air peak-pressure is defined as the pressure at the head of the blast wave in regions where it has not been reinforced by a reflected wave. Operation in the test area was more difficult than anticipated. Heavy winds made balloon handling very difficult. On the whole, the radio link performed satisfactorily on all occasions and appears to be a reliable method. For some unknown reason, blast switches closer than 1,500 feet failed to give satisfactory signals. Pressures were computed using the Rankine-Hugoniot relation, which is based on the shock wave being a definite discontinuity in pressure. Since the pressures measured on the ground showed relatively long times, there has been some speculation that a true shock wave may not exist in free air. If a true shock wave does not exist in the free-air region, pressures as computed are not correct, and the method of this experiment cannot be used.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SHOCK WAVES -- PRESSURE MEASUREMENT
Descriptors: BALLOONS; WIND
Broader Terms: AIRSHIPS; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/506 (Item 206 from file: 103)
01877600 ERA-12-005127; EDB-87-005233
Author(s): Hall, W.C.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.5. Neutron measurements. Part 3. High-energy spectrum (time-of-flight method)
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Sep 1985 p 84
Report Number(s): AD-A-995399/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report describes the experiments performed to measure the energy spectrum of neutrons released in certain atomic-weapons tests in Operation Greenhouse. The measurements were made of two types: (1) the time-of-flight measurements designed to establish the fission neutron spectrum down to about 3 MeV energy, and (2) the so-called Tenex (Temperature-Neutron Experiment) measurements designed to obtain the velocity distribution of neutrons produced by the deuterium-tritium fusion reactions.
Major Descriptors: *GREENHOUSE PROJECT; *NEUTRON SPECTRA -- TIME-OF-FLIGHT METHOD; *NUCLEAR EXPLOSIONS -- NEUTRON SPECTRA
Descriptors: DEUTERIUM; NEUTRON DETECTORS; NEUTRON FLUX; TRITIUM
Broader Terms: BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; EXPLOSIONS; HYDROGEN ISOTOPES; ISOTOPES; LIGHT NUCLEI; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIATION DETECTORS; RADIATION FLUX; RADIOISOTOPES; SPECTRA; STABLE ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/507 (Item 207 from file: 103)
01877599 ERA-12-005126; EDB-87-005232
Author(s): Shonka, F.R.; Pawlicki, G.S.
Title: Operation Sandstone. Scientific Director's report of atomic-weapon tests at Eniwetok, 1948. Annex 8. Gamma-ray measurements. Parts 1, 2, 3, 4, and 5. Sandstone report No. 29

Publication Date: 1 Sep 1985 p 245
Report Number(s): AD-A-995396/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A11/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Curves of absorption of gamma rays in boron carbide and a few points on the absorption curve in lead were obtained during the three atomic explosions of Operation Sandstone. Radiation was detected by integrating ionization chambers and by photographic emulsions. A few recording-type ionization chambers were used to give intensities as a function of time. Radiation detectors were located inside of shelters which protected them from blast and shielded them from scattered radiation. Because of geometry, scattered radiation was negligible and the analysis of absorption curves yields the true total absorption coefficient for the radiation.
Major Descriptors: *GAMMA SPECTRA -- MEASURING METHODS; *NUCLEAR EXPLOSIONS -- GAMMA SPECTRA; *SANDSTONE PROJECT
Descriptors: BORON CARBIDES; SHELTERS
Broader Terms: BORON COMPOUNDS; CARBIDES; CARBON COMPOUNDS; EXPLOSIONS; NUCLEAR EXPLOSIONS; SPECTRA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/508 (Item 208 from file: 103)
01877596 ERA-12-005123; EDB-87-005229
Author(s): Mullaney, J.F.; Cadenhead, C.P.; Cooper, R.S.; Humphrey, R.W.
Title: Operation Hardtack. Project 10.1. Report to the Scientific Director. Fireball yields
Corporate Source: Los Alamos National Lab., NM (USA)
Publication Date: 1 Sep 1985 p 18
Report Number(s): AD-A-995392/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The yields for the LASL shots of Operation Hardtack, Project 10.1, were calculated from fireball diameter-time data using several related methods. Data were obtained with high-speed motion-picture photography. Zero-frame time was determined by comparing the fireball diameters obtained from the motion-picture film with the diameter-time curve. Other methods and techniques used for determining and calculating yields are given.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- NUCLEAR FIREBALLS; *NUCLEAR FIREBALLS -- PHOTOGRAPHY; *NUCLEAR FIREBALLS -- YIELDS
Broader Terms: EXPLOSIONS; FIREBALLS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/509 (Item 209 from file: 103)
01877595 ERA-12-005122; EDB-87-005228
Author(s): Parker, W.J.; Jenkins, R.J.; Inn, E.C.Y.
Title: Operation Hardtack. Project 8.4. Early-time spectra of very-high-altitude nuclear detonations
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 1 Sep 1985 p 22
Report Number(s): AD-A-995391/0/XAB

Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this project was to photograph the spectrum of the bomb light of the three high-altitude nuclear detonations of Operation Hardtack from two high-flying aircraft with a time resolution of 50 seconds and a spectral resolution adequate to identify the emission or absorption spectrum of molecular species that might be formed around the fireball.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- NUCLEAR FIREBALLS; *NUCLEAR FIREBALLS -- ABSORPTION SPECTRA; *NUCLEAR FIREBALLS -- EMISSION SPECTRA
Descriptors: AIRCRAFT; ATMOSPHERIC EXPLOSIONS; BOMBS; MOLECULES; PHOTOGRAPHY; RESOLUTION
Broader Terms: EXPLOSIONS; FIREBALLS; NUCLEAR EXPLOSIONS; SPECTRA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/510 (Item 210 from file: 103)
01877594 ERA-12-005121; EDB-87-005227
Author(s): Brubaker, R.M.; Gauvin, H.P.; Stair, A.T.; Cahill, J.P.; Baker, D.J.
Title: Operation Hardtack. Project 8.2. Thermal radiation from high-altitude bursts
Corporate Source: Air Force Geophysics Lab., Hanscom AFB, MA (USA)
Publication Date: 1 Sep 1985 p 68
Report Number(s): AD-A-995390/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this project was to improve the basic understanding of the physics of high-altitude nuclear detonations by measuring the thermal radiation from the high-altitude Shots Yucca, Orange, and Teak. Spectral irradiances obtained by distant airborne instrumentation are presented as a function of time in four wavelength bands. The measurements are extrapolated to an assumed point source, and these generalized results are discussed. Simple scaling laws are not sufficient to predict the thermal radiation from a high-altitude nuclear detonation. In particular, the power radiated in the infrared exceeds by a large factor that expected from a black body of dimensions comparable with the visible fireball. This implies the existence of some mechanism that is producing a greater proportion of infrared radiation than would be obtained using the equilibrium blackbody theory.
Major Descriptors: *BLACKBODY RADIATION; *HARDTACK PROJECT; *INFRARED RADIATION; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *THERMAL RADIATION -- SPECTRA
Descriptors: ATMOSPHERIC EXPLOSIONS; NUCLEAR FIREBALLS; PHYSICS; TIME DEPENDENCE
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; FIREBALLS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/511 (Item 211 from file: 103)
01877593 ERA-12-005120; EDB-87-005226
Author(s): Derksen, W.L.; Carter, J.A.; Hirschman, A.; de Lhery, G.P.; Korbel, H.

radiation from nuclear detonations
Corporate Source: New York Naval Shipyard, Brooklyn (USA). Material Lab.
Publication Date: 1 Sep 1985 p 39
Report Number(s): AD-A-995389/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this investigation was to determine the adequacy of the irradiation area, time variation of irradiance, and spectrum of the laboratory sources employed in evaluating the protection afforded to personnel by military clothing. The primary objective of measuring the radiant exposure and irradiance histories at the earth's surface was attained, except for the resolution of the irradiance histories in the early phase of the pulse and the precise determination of the radiant-exposure values for the obscured station for Shot Teak and the airborne station for Shot Orange. For general studies of effects of thermal radiation from high-altitude nuclear bursts, the documentation of the stimulus in future field tests should include better time resolution in total-irradiance measurements and some spectral breakdown of the irradiance history.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *PROTECTIVE CLOTHING -- PERFORMANCE; *THERMAL RADIATION -- RADIATION PROTECTION
Descriptors: FIELD TESTS; LABORATORIES; RESOLUTION; STIMULI; SURFACES; VARIATIONS
Broader Terms: CLOTHING; ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; RADIATIONS; TESTING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/512 (Item 212 from file: 103)
01877592 ERA-12-005119; EDB-87-005225
Author(s): Bastian, C.W.; Robbiani, R.; Hargrave, J.
Title: Operation Hardtack. Project 6.6. X-band radar determination of nuclear-cloud parameters
Corporate Source: Army Signal Research and Development Lab., Fort Monmouth, NJ (USA)
Publication Date: 1 Sep 1985 p 36
Report Number(s): AD-A-995388/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The general objectives of this project were to make observations with weather Radar Set AN/CPS-9 in order to determine what characteristics and parameters of a nuclear detonation could be detected with X-band radar. The specific objectives were to obtain data that would lead to the determination of the following information relative to the nuclear cloud; rate of rise, rate of horizontal growth, maximum height, maximum diameter, stabilized height, fallout pattern due to the initial cloud formation, and range and azimuth versus time. As a result of this project, it was determined that the AN/CPS-9 radar is well suited for observations of surface or near-surface bursts, as would be expected from a comparison of its performance characteristics with those of other available radar sets.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS
Descriptors: FALLOUT; HEIGHT; RADAR; STABILIZATION; SURFACES

NUCLEAR EXPLOSIONS; RANGE FINDERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/513 (Item 213 from file: 103)
01877591 ERA-12-005118; EDB-87-005224
Author(s): Pickering, J.E.; Culver, W.T.; Allen, R.G.; Benson, R.E.; Morris, F.M.
Title: Operation Hardtack. Project 4.1. Effects on eyes from exposure to very-high-altitude bursts
Corporate Source: School of Aviation Medicine, Randolph AFB, TX (USA)
Publication Date: 1 Sep 1985 p 57
Report Number(s): AD-A-995387/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The primary objective of this project was to determine the extent of chorioretinal damage caused by exposure to very-high-altitude, high-yield nuclear detonations at distances of 50 to 350 nautical miles from burst point and to relate experimental data to theoretical calculations. A correlated objective was to estimate, from the data derived from these experiments, distance limits beyond which retinal burns were not expected to occur from nuclear detonations at these altitudes. From these data, it is concluded that all retinal burns occurring within 160 nautical miles would produce a permanent scotoma in the human. Macular involvement especially would reduce visual acuity to a critical level.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- BIOLOGICAL RADIATION EFFECTS; *RETINA -- RADIATION BURNS
Descriptors: ATMOSPHERIC EXPLOSIONS; DAMAGE; DATA PROCESSING; YIELD STRENGTH
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; BODY AREAS; BURNS; EXPLOSIONS; EYES; FACE; HEAD; INJURIES; LOCAL RADIATION EFFECTS; MECHANICAL PROPERTIES; NUCLEAR EXPLOSIONS; ORGANS; PROCESSING; RADIATION EFFECTS; RADIATION INJURIES; SENSE ORGANS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/514 (Item 214 from file: 103)
01877590 ERA-12-005117; EDB-87-005223
Author(s): LeDoux, J.C.; Rush, P.J.
Title: Operation Hardtack. Project 3.2. Response of earth-confined flexible-arch structures in high-overpressure regions
Corporate Source: Naval Civil Engineering Lab., Port Hueneme, CA (USA)
Publication Date: 1 Sep 1985 p 158
Report Number(s): AD-A-995386/0/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this project was to determine structural responses and failure criteria of earth-confined corrugated-steel flexible arches subjected to high overpressure blast loading from nuclear detonations. A flexible arch is considered as an arch structure whose ultimate supporting capacity is dependent upon confinement within a surrounding earth configuration. A collateral objective was to determine the radiation-shielding effectiveness of such structures with a minimum cover of five feet of coral sand. Because the soil and ground-water

below natural-grade level, the structures were confined within massive non-drag sensitive earthwork configurations of coral sand. Empirical determinations were made of the responses of (1) three earth-confined prefabricated corrugated-steel flexible arches when subjected to relatively long-duration blast loadings from a megaton range detonation; and (2) one similar earth-confined flexible-arch when subjected to relatively short-duration blast loadings from a kiloton-range detonation.
Major Descriptors: *FALLOUT SHELTERS -- BLAST EFFECTS; *FALLOUT SHELTERS -- SHIELDING; *HARDTACK PROJECT; *MECHANICAL STRUCTURES -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: DETONATIONS; GROUND WATER; SAND
Broader Terms: EXPLOSIONS; HYDROGEN COMPOUNDS; NUCLEAR EXPLOSIONS; OXYGEN COMPOUNDS; SHELTERS; WATER
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/515 (Item 215 from file: 103)
01877589 ERA-12-005116; EDB-87-005222
Author(s): Hanscome, T.D.; Alers, P.B.; Caldwell, P.A.; Drachman, R.J.; Gorbics, S.G.
Title: Operation Hardtack. Project 2.6. Neutron flux from very-high-altitude bursts
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Sep 1985 p 97
Report Number(s): AD-A-995383/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The primary objective of this project was to measure neutron flux and gamma-ray flux versus range and time from missile-borne, megaton nuclear detonations at high altitudes by means of instrumented pods that were to be ejected, during the missile thrust period, at times that were selected to position the pods at predetermined distances from the burst. Specific objectives were: (1) neutron flux versus time was to be measured at each of three pod positions during each shot and (2) a measurement of gamma-ray dose rate versus time was sought from each pod during each shot.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- GAMMA RADIATION; *NUCLEAR EXPLOSIONS -- NEUTRON FLUX
Descriptors: ATMOSPHERIC EXPLOSIONS; DETONATIONS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATION FLUX; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/516 (Item 216 from file: 103)
01877588 ERA-12-005115; EDB-87-005221
Author(s): Hansen, D.F.; Perry, J.E.; Rockman, A.G.
Title: Operation Hardtack. Report to the Scientific Director. Power-time and total-thermal measurements
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Sep 1985 p 47
Report Number(s): AD-A-995381/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States

determine the very-high-altitude behavior of two nuclear explosions, namely, the thermal power versus time and the total thermal yield. The power-time measurements were performed wth four bolometers chopper units. A large dynamic range was provided both electronically and by neutral filters. The total thermal yield of the Teak Shot was measured by thermopile recorder systems. The total thermal yield for Orange Shot could not be determined because of the cloud cover present over Johnston Island.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *THERMAL RADIATION -- YIELDS
Descriptors: ATMOSPHERIC EXPLOSIONS; BOLOMETERS; CLOUD COVER; POWER; RECORDING SYSTEMS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; MEASURING INSTRUMENTS ; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/517 (Item 217 from file: 103)
01877574 ERA-12-005114; EDB-87-005207
Author(s): Beck, C.A.; Campbell, J.H.
Title: Operation Castle. Project 18.3. High-resolution spectroscopy
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Sep 1985 p 45
Report Number(s): AD-A-995367/0/XAB; NRL-4519(EX)
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The high-resolution work undertaken at Castle with three spectrographs of relatively high dispersion is described and analyzed. Profitable results were obtained from the spectra taken with the JACO 21-foot Wadsworth-mount spectrograph, mainly the highest violet cutoff to date and a very predominant NO/sub 2/ spectrum in absorption. There is a definite indication that the NO/sub 2/ exists in a state of excitation above that observed at ordinary room temperature. The observation as a function of time of the formation NO/sub 2/, which conceivably can be formed in different ways during different intervals of the explosion, would be of great interest.
Major Descriptors: *CASTLE PROJECT; *NITROGEN DIOXIDE -- ABSORPTION SPECTRA ; *NUCLEAR EXPLOSIONS -- NUCLEAR FIREBALLS; *NUCLEAR EXPLOSIONS -- SPECTROSCOPY; *NUCLEAR FIREBALLS -- ABSORPTION SPECTRA
Descriptors: EXCITATION
Broader Terms: CHALCOGENIDES; ENERGY-LEVEL TRANSITIONS; EXPLOSIONS; FIREBALLS; NITROGEN COMPOUNDS; NITROGEN OXIDES; NUCLEAR EXPLOSIONS; OXIDES; OXYGEN COMPOUNDS; SPECTRA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/518 (Item 218 from file: 103)
01877571 ERA-12-005111; EDB-87-005204
Author(s): Curtis, W.E.
Title: Operation Sandstone. Nuclear explosions--1948. Annex 5. Part 3. Blast measurement of pressure as a function of time. Sandstone report No. 22
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1 Apr 1985 p 446
Report Number(s): AD-A-995364/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A19/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)

Country of Publication: United States
Abstract: Free-piston gauges used to measure the parameters of the air shock wave at various distances from the point of detonation were investigated. This gauge consists of a piston, free to move with no restoring forces, and acted upon at one end by the shock wave which records a space-time curve, i.e., a distance-versus-time curve of the piston's movement. A description of the instrument and a method of analyzing the records are presented, together with an evaluation of possible errors in the measurements. Air-blast pressure measurements made during X-ray, Yoke, and Zebra shots at various distances from the bomb are reported. The measurements consisted of the recording of pressure on a time base by means of diaphragm blast gauge channels. The gauge consists essentially of a small, fixed-edge diaphragm in which deformation due to pressure are transformed into changes of electrical resistance. The instrumentation, consisting of the gauge, carrier-type amplifier and recorders, as well as the power system, is described. Changes made in the instrumental setup after the initial test are discussed.
Major Descriptors: *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SANDSTONE PROJECT; *SHOCK WAVES -- PRESSURE MEASUREMENT
Descriptors: PRESSURE GAGES; TIME DEPENDENCE
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/519 (Item 219 from file: 103)
01877566 ERA-12-005108; EDB-87-005199
Author(s): Engquist, E,H.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 6.6. Evaluation of filter material
Corporate Source: Chemical and Radiological Labs., Army Chemical Center, MD (USA)
Publication Date: 1 Apr 1985 p 58
Report Number(s): AD-A-995358/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Four types of standard and developmental filter materials used in individual and collective-protective devices and one type of developmental filter material used for sampling of air for particulate matter were evaluated against the contamination produced by the detonation of an atomic bomb and present in the resulting radioactive cloud. These filter materials were evaluated in multilayer pads at the standard flow-rate conditions used by the Chemical Corps in evaluation studies of filter materials. This permitted correlation of results of laboratory data. Analysis of the materials was made by counting the gross beta activity collected on successive layers of the same filter material and the efficiency of the materials was calculated from the data obtained.
Major Descriptors: *AIR SAMPLERS -- AIR FILTERS; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- AIR SAMPLERS; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS -- AIR SAMPLERS
Descriptors: AEROSOLS; AIR FLOW; EFFICIENCY; FIBERS; FILTRATION; FISSION PRODUCTS; FLIGHT TESTING; FLOW RATE; PARTICLE SIZE; PARTICULATES; RADIOACTIVE MATERIALS; RESPIRATION; SAMPLING
Broader Terms: CLOUDS; COLLOIDS; DISPERSIONS; EQUIPMENT; EXPLOSIONS; FILTERS; FLUID FLOW; GAS FLOW; ISOTOPES; MATERIALS; NUCLEAR EXPLOSIONS; PARTICLES; POLLUTION CONTROL EQUIPMENT; RADIOACTIVE MATERIALS; SAMPLERS ; SEPARATION PROCESSES; SIZE; SOLS; TESTING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/520 (Item 220 from file: 103)
01877565 ERA-12-005107; EDB-87-005198
Author(s): Rados, R.M.; Bogert, J.C.; Haig, T.O.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 4.2. Measurement of surface-air movements associated with atomic blasts
Corporate Source: Air Force Cambridge Research Center, MA (USA). Atmospheric Physics Lab.
Publication Date: 1 Sep 1985 p 96
Report Number(s): AD-A-995357/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this project was to record continuous measurements of the surface winds in the vicinity of an atomic blast immediately prior to the blast, during passage of the shock wave, and immediately after the blast with special regard to the blast-induced afterwind following local dissipation of the shock wave. From the data obtained, it was concluded that following an atomic explosion there are two specific causes of air-mass movement. One is related to the shock phenomenon and the other to the rising fireball. It can also be concluded that the heated-thermopile-type and strain-gage-type anemometers could be developed to yield more complete data on the air-mass movement at ground level following an atomic explosion.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- SHOCK WAVES
Descriptors: ANEMOMETERS; GROUND LEVEL; NUCLEAR FIREBALLS; WIND
Broader Terms: EXPLOSIONS; FIREBALLS; LEVELS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/521 (Item 221 from file: 103)
01877564 ERA-12-005106; EDB-87-005197
Author(s): Anderson, C.E.; Gustafson, P.E.; Kellogg, W.W.; McKown, R.E.; McPherson, D.E.
Title: Operation Greenhouse. Scientific Director's report of atomic-weapon tests at Eniwetok, 1951. Annex 4.1. Cloud studies. Part 1. Cloud physics. Part 2. Development of the atomic cloud. Part 3. Cloud-tracking photography
Corporate Source: Air Force Cambridge Research Center, MA (USA). Atmospheric Physics Lab.
Publication Date: 1 Sep 1985 p 178
Report Number(s): AD-A-995356/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The cloud-physics project was primarily intended to fulfill a requirements for detailed information on the meteorological microstructure of atomic clouds. By means of a tracking and photographic network extending halfway around Eniwetok Atoll, the behavior of the first three clouds of Operation Greenhouse were observed and recorded. The rise of the fourth cloud was observed visually from only one site. The analysis of these observations, combined with information about the local weather conditions, gives a fairly complete picture of the development of each of the clouds. Particular emphasis was placed on the earlier phases of development,

functions of time. A summary of important features of some previous atomic clouds are included for comparison.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *RADIOACTIVE CLOUDS -- PHOTOGRAPHY
Descriptors: HEIGHT; TURBULENCE; WEATHER
Broader Terms: CLOUDS; DIMENSIONS; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/522 (Item 222 from file: 103)
01877563 ERA-12-005105; EDB-87-005196
Author(s): Porzel, F.B.; Whitener, J.E.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.6. Blast measurements. Part 5. Measurement of density, temperature, and material velocity in an air shock produced by a nuclear explosion
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: 1 Sep 1985 p 146
Report Number(s): AD-A-995355/5/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The results from laboratory tests and test firing were quite encouraging. It was concluded that: (1) the beta densitometer is a feasible device for the measurement of density as a function of time in the shock wave from a nuclear explosion. It is limited to pressure levels of 6 or 8 psi for bombs in the range of 50 kt, but is capable of higher-pressure levels on larger bombs where the interference from gamma rays is less serious; (2) dust-loading behind the shock wave is a major perturbation to the ideal hydrodynamics and can change the density by as large a factor as the shock itself; (3) the rise time at distances of 7,500 feet on Easy Shot was sharp within a resolution of approximately 0.2 msec; and (4) the field calibration used on Operation Greenhouse appeared reasonably accurate and was worthy of subsequent development.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SHOCK WAVES -- DENSITY; *SHOCK WAVES -- VELOCITY
Descriptors: AIR; BOMBS; CALIBRATION; DENSITOMETERS; HYDRODYNAMICS; PRESSURE MEASUREMENT; TIME DEPENDENCE
Broader Terms: EXPLOSIONS; FLUID MECHANICS; FLUIDS; GASES; MEASURING INSTRUMENTS; MECHANICS; NUCLEAR EXPLOSIONS; PHOTOMETERS; PHYSICAL PROPERTIES; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/523 (Item 223 from file: 103)
01877562 ERA-12-005104; EDB-87-005195
Author(s): Biggers, W.A.; Brown, L.J.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.5. Neutron measurements. Part 2. External neutron- and gamma flux measurements by sample activation. Section 1
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: 1 Sep 1985 p 71
Report Number(s): AD-A-995354/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States

Abstract: The Greenhouse operation consisted of a series of four shots conducted at Eniwetok during the Srping of 1951. The external neutron threshold measurements consisted of the use of good samples to measure integrated thermal neutron fluxes and sulfur, iodine, and zirconium samples to measure fluxes of higher-energy neutrons. The iodine also measured high-energy gamma-ray intensity. Measurements were also made on slow- and fast-neutron intensities as a function of time.
Major Descriptors: *GAMMA SPECTRA -- ACTIVATION DETECTORS; *GREENHOUSE PROJECT; *NEUTRON FLUX -- ACTIVATION DETECTORS; *NUCLEAR EXPLOSIONS -- GAMMA SPECTRA; *NUCLEAR EXPLOSIONS -- NEUTRON FLUX
Descriptors: FAST NEUTRONS; GOLD; IODINE; NEUTRON DETECTORS; SAMPLING; SULFUR; THERMAL NEUTRONS; TIME DEPENDENCE; ZIRCONIUM
Broader Terms: BARYONS; ELEMENTARY PARTICLES; ELEMENTS; EXPLOSIONS; FERMIONS; HADRONS; HALOGENS; MEASURING INSTRUMENTS; METALS; NEUTRON DETECTORS; NEUTRONS; NONMETALS; NUCLEAR EXPLOSIONS; NUCLEONS; RADIATION DETECTORS; RADIATION FLUX; SPECTRA; TRANSITION ELEMENTS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/524 (Item 224 from file: 103)
01877561 ERA-12-005103; EDB-87-005194
Author(s): Hall, W.C.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.1. Prompt-gamma-ray measurements. Part 2. Prompt-gamma-ray intensity as a function of time
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Sep 1985 p 71
Report Number(s): AD-A-995350/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report describes the procedure followed and the results obtained in measuring, as a function of time, the prompt gamma radiation emitted within 1,000 seconds after the explosion of the atomic weapons studies in Operation Greenhouse. The design of the experiment and a description of the equipment are given. The fast coaxial scintillation detectors for the Greenhouse test were used without collimators at a distance of several mean free paths from the source. Numerous factors complicated the interpretation of the data obtained, thus reducing the accuracy that may be ascribed to the results. The probable peak gamma-ray intensity, the time of occurrence of the peak, and the prompt-gamma decay curves as a function of time were obtained for each shot. A composite decay curve fitting all the shots was obtained, and from this, a scaling factor was deduced which related the shot energy to the gamma-ray intensity.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- PROMPT GAMMA RADIATION; *PROMPT GAMMA RADIATION -- MEASURING METHODS
Descriptors: DECAY; SCINTILLATION COUNTERS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; GAMMA RADIATION; IONIZING RADIATIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RADIATION DETECTORS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/525 (Item 225 from file: 103)
01877560 ERA-12-005102; EDB-87-005193
Author(s): Reed, J.W.; Gauvin, H.P.; Cahill, J.P.; Grenier, J.W.; Baker, D.J.
Title: Operation Hardtack. Project 8.8. Thermal radiation from low-yield nuclear bursts. Report for April-October 1958
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)

Report Number(s): AD-A-995349/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of Project 8.8 during the Nevada Test Site phase of Operation Hardtack was to investigate the thermal phenomena resulting from the detonation of fractional-kiloton-yield nuclear devices. Measurements were made by the Air Force Cambridge Research Laboratories on six bursts with yields less than 1 kt. To provide correlation with the data, additional measurements were made on four bursts with yields greater than a kiloton.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION
Descriptors: BOLOMETERS; COMPARATIVE EVALUATIONS; INFRARED SPECTRA; NEVADA
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; FEDERAL REGION IX; MEASURING INSTRUMENTS; NORTH AMERICA; NUCLEAR EXPLOSIONS; RADIATIONS; SPECTRA; USA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/526 (Item 226 from file: 103)
01877559 ERA-12-005101; EDB-87-005192
Author(s): Baker, E.; Viars, T.; McAfee, W.S.; Balton, I.A.
Title: Operation Hardtack. Project 6.5. Radar determination of fireball phenomena
Corporate Source: Army Signal Research and Development Lab., Fort Monmouth, NJ (USA)
Publication Date: 1 Sep 1985 p 69
Report Number(s): AD-A-995347/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objectives of this project were to investigate the nature of radar echoes from the fireball produced by atomic detonations, and to determine the feasibility of finding ground zero, height-of-burst, and yield by means of radar echoes. It was concluded that no radar echoes were received from the fireballs of any Hardtack detonations. For surface shots, radar techniques can be used to determine ground zero to an accuracy of + or - 140 feet. The proportionality between maximum target size and yield of the device indicated that maximum size might be used as a rough measure of yield.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- NUCLEAR FIREBALLS; *NUCLEAR FIREBALLS
Descriptors: HEIGHT; RADAR; REFLECTION; YIELDS
Broader Terms: DIMENSIONS; EXPLOSIONS; FIREBALLS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RANGE FINDERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/527 (Item 227 from file: 103)
01877558 ERA-12-005100; EDB-87-005191
Author(s): Lavicka, F.; Lang, G.
Title: Operation Hardtack. Project 6.4. Wave form of electromagnetic pulse from nuclear detonations
Corporate Source: Army Signal Research and Development Lab., Fort Monmouth, NJ (USA)
Publication Date: 1 Sep 1985 p 29

Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The wave form of the electromagnetic pulse resulting from nuclear detonations, especially at very high altitudes is analyzed. In particular, broadband measurements were made from 0 to 10 Mc at ranges up to 460 statue miles. The measurements were a continuation of those made during Operation Plumbbob, although improvements in equipment were incorporated wherever possible. The increased cataloging of EM-pulse wave-form data was very useful in the field of nuclear surveillance. The presence of a second stage in a thermonuclear device can be detected within certain range and system-bandwidth limitations. Correlations of first and second crossover points with total yield, noted in previously recorded wave forms, are supported by these test results. The agreement obtained from the Shot Holly sky wave crossover times indicates that these measurements are relatively independent of propagation and, therefore, more valuable than field strength for determining yield.
Major Descriptors: *ELECTROMAGNETIC PULSES -- WAVE FORMS; *HARDTACK PROJECT ; *NUCLEAR EXPLOSIONS -- ELECTROMAGNETIC PULSES
Descriptors: ELECTRIC FIELDS; NUCLEAR WEAPONS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; PULSES; RADIATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/528 (Item 228 from file: 103)
01877557 ERA-12-005099; EDB-87-005190
Author(s): Whitcher, S.L.; Bunney, L.R.; Soule, R.R.; Roza, R.A.
Title: Operation Hardtack. Project 2.8. Fallout measurements by aircraft and rocket sampling
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 1 Sep 1985 p 84
Report Number(s): AD-A-995345/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The general objective of this project was to estimate, from analytical data on cloud samples, the relative distribution of certain radionuclides between the local and worldwide fallout formed by megaton-range detonations on land and water surfaces, with particular emphasis on the distribution of Sr90 and Cs137 between local and worldwide fallout. Specific objectives were to: (1) obtain airborne particle and gas samples by rocket and aircraft sampling techniques; (2) determine the distribution of radionuclides between two groups of particles that differed from one another in their falling rates in air and that could be considered representative of local and worldwide fallout; (3) attempt to determine an early time distribution of radionuclides and particles between the upper and lower halves of the cloud and radially outward from the cloud axis; and (4) estimate the extent of separation of fallout from gaseous fission products by fission determinations on gas and particle samples collected coincidentally near the top of the cloud at various times following the shots.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *NUCLEAR EXPLOSIONS -- SURFACE EXPLOSIONS; *RADIOACTIVE CLOUDS

Descriptors: CESIUM 137; CLOUDS; FISSION PRODUCTS; GASES; SAMPLING; STRONTIUM 90
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CLOUDS; EVEN-EVEN NUCLEI; EXPLOSIONS; FLUIDS; INTERMEDIATE MASS NUCLEI; ISOTOPES; MATERIALS; NUCLEAR EXPLOSIONS; NUCLEI; ODD-EVEN NUCLEI; RADIOACTIVE MATERIALS; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/529 (Item 229 from file: 103)
01877556 ERA-12-005098; EDB-87-005189
Title: Operation Sandstone. Scientific meteorological information
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 316
Report Number(s): AD-A-995340/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A14/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report is concerned primarily with the data collected on the visible atomic clouds. The meteorological observations are those for the test days only. The amounts of energy released by the bombs are considered only insofar as they affect the atomic cloud formations. The phenomena described are those that could be seen or photographed. The XRAY Day weapon appeared to release somewhat more energy than did the air burst at Bikini; the YOKE Day weapon was somewhat more violent than that of XRAY Day; and the ZEBRA Day weapon was perhaps less violent than the ABLE Day bomb. The ZEBRA Day cloud attained a much lower altitude than either the XRAY or the YOKE Day clouds.
Major Descriptors: *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS; *SANDSTONE PROJECT
Descriptors: ALTITUDE; METEOROLOGY; YIELDS
Broader Terms: CLOUDS; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/530 (Item 230 from file: 103)
01877548 ERA-12-005090; EDB-87-005181
Title: Operation Sandstone. Nuclear explosions. 1948. Appendix C to report Number 10. Special vehicles for Operation Sandstone
Corporate Source: USAEC, Washington, DC
Publication Date: 1948 p 44
Report Number(s): AD-A-995325/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Two tanks (type M-5) were modified and provided with radio control equipment so that these tanks could be directed by remote control to a designated spot and a sample of earth procured in a scoop mounted on the front of the vehicle. Control transmitters were provided so that the vehicles could be operated from a distance, either from a stationary platform or from a helicopter in flight. The special tanks performed satisfactorily and accomplished the mission for which they were designed. However, the operation demonstrated that changes in the design of the vehicles are desirable. For any future operation under similar conditions, a lighter, wide-track vehicle, is recommended.

*SANDSTONE PROJECT; *SOILS -- SAMPLERS
Descriptors: CONTROL SYSTEMS; HELICOPTERS; RADIO EQUIPMENT; VEHICLES
Broader Terms: AIRCRAFT; CONTROL; ELECTRONIC EQUIPMENT; EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/531 (Item 231 from file: 103)
01877547 ERA-12-005088; EDB-87-005180
Title: Operation Sandstone. Nuclear explosions. 1948. Engineer's report. Part 2. Sandstone report No. 42
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 286
Report Number(s): AD-A-995323/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A13/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report presents triangulation computations data for Eniwetok Atoll in 1948. A scheme of first-order triangulation composed of check figures was executed along the eastern side of the atoll from a first-order base line on Runit Island. This scheme extends northward to Engebi Island and southward to Aniyaanii Island, and was executed for the purpose of coordinating local surveys on the activated islands and to establish distances and azimuths between certain installations. All observations were made at night, and standard procedure was followed throughout. The maximum triangle closure for the entire scheme was 02.41 seconds and the average 01.01 seconds. The maximum triangle closure in the base expansion figure was 01.10 seconds and the average 00.55 seconds.
Major Descriptors: *ENIWETOK -- SITE SURVEYS; *NUCLEAR EXPLOSIONS; *SANDSTONE PROJECT
Descriptors: EXPANSION; ISLANDS
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/532 (Item 232 from file: 103)
01877546 ERA-12-005081; EDB-87-005179
Author(s): Scoville; Andrews, H.L.; Hoffman, E.J.; Vicars, E.C.
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 4, Part 11. Neutron absorption measurements during Operation Sandstone. Sandstone report No. 19
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 30 Jun 1948 p 48
Report Number(s): AD-A-995316/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The flux of fast neutrons of energy greater than 3 MeV was measured by means of sulfur, and neutrons of this energy were found to be lethal (assuming 10/sup 11/ n/cm/sup 2/ is lethal) at distances from 650 yards in Test Yoke to 500 yards in Test Zebra. The slow-neutron flux as measured with arsenic in Test Zebra indicated that these would have been lethal (assuming 5 x 10/sup 11/ n/cm/sup 2/ is lethal) at about 100 yards greater distance than at the sulfur neutrons. Absorption measurements made with steel and concrete indicate that 3

fast-neutron flux by a factor of 2. Six inches of steel on all sides were found necessary to reduce the slow-neutron flux by a factor of 2, and concrete was found to be less effective in cutting down the number of slow neutrons. In general, the fast neutrons travel in the direction away from the point of detonation, but the slow neutrons were found to be non directional.
Major Descriptors: *NEUTRON FLUX -- MEASURING METHODS; *NUCLEAR EXPLOSIONS -- NEUTRON FLUX; *SANDSTONE PROJECT
Descriptors: ABSORPTION; ARSENIC; DETONATIONS; FAST NEUTRONS; NEUTRONS; SHIELDING; SULFUR; TRAVEL
Broader Terms: BARYONS; ELEMENTARY PARTICLES; ELEMENTS; EXPLOSIONS; FERMIONS; HADRONS; NEUTRONS; NONMETALS; NUCLEAR EXPLOSIONS; NUCLEONS; RADIATION FLUX; SEMIMETALS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/533 (Item 233 from file: 103)
01877545 ERA-12-005080; EDB-87-005178
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 3. Part 3. Addenda to Part 1. Operation Sandstone report by Groups LAJ - 4B, LAJ - 12A. Sandstone report No. 17
Corporate Source: Edgerton, Germeshausen and Grier, Inc., Cambridge, MA (USA)
Publication Date: 30 Sep 1948 p 135
Report Number(s): AD-A-995315/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This addendum contains diagrams and drawing of various test equipment and other instrumentation including a dehumidifier.
Major Descriptors: *NUCLEAR WEAPONS -- TESTING; *SANDSTONE PROJECT
Descriptors: DEHUMIDIFIERS; ELECTRONIC CIRCUITS; EQUIPMENT; MEASURING INSTRUMENTS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/534 (Item 234 from file: 103)
01877544 ERA-12-005079; EDB-87-005177
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 3, Part 2. Addenda to Part 1. Operation sandstone report by Groups LAJ - 4B LAJ - 12A. Sandstone report No. 16
Corporate Source: Edgerton, Germeshausen and Grier, Inc., Cambridge, MA (USA)
Publication Date: 30 Sep 1948 p 86
Report Number(s): AD-A-995314/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This document consists of control and circuit diagrams, photographs of various test equipment components, etc.
Major Descriptors: *NUCLEAR WEAPONS -- TESTING; *SANDSTONE PROJECT
Descriptors: ELECTRICAL EQUIPMENT; ELECTRONIC CIRCUITS
Broader Terms: EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear --

10/5/535 (Item 235 from file: 103)
01877543 ERA-12-005078; EDB-87-005176
Author(s): Ogle
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 2, Part 4. Slowly varying light from an atomic explosion as measured with a photocell, Sandstone report No. 14
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 28 Jul 1948 p 29
Report Number(s): AD-A-995313/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: During the atomic bomb tests in 1948, it became of interest to measure the light intensity from a bomb in the time interval of 0 to 1 second. The measurement was made from the AV-5 which was at a distance of 8.9 miles from the explosion. Since no external signal to trigger the oscilloscope sweep was available, it was necessary to use the light itself for this purpose, Two scopes were used: one with a linear sweep length of about 400 microseconds, and the second with an exponential sweep which was about a second long.
Major Descriptors: *NUCLEAR EXPLOSIONS -- VISIBLE RADIATION; *SANDSTONE PROJECT; *VISIBLE RADIATION -- MEASURING METHODS
Descriptors: EMISSION; SIGNALS; TRIGGER CIRCUITS
Broader Terms: ELECTROMAGNETIC RADIATION; ELECTRONIC CIRCUITS; EXPLOSIONS; NUCLEAR EXPLOSIONS; PULSE CIRCUITS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/536 (Item 236 from file: 103)
01877542 ERA-12-005077; EDB-87-005175
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 2, Part 3, Volume 3. Operation Sandstone measurements by NRL. Sandstone report no. 13, September 1947-September 1948
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: Sep 1948 p 286
Report Number(s): AD-A-995312/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A13/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This volume describes the nonelectronic equipment necessary to the Naval Research Laboratory's participation in Operation Sandstone and provides a chronology of the project. The subject matter covered includes: ionization chambers; radiometry equipment used in the measurement of visible, ultraviolet, and infrared energy; photography used to record cathode ray tube traces; and transmission lines - principally from the mechanical point of view.
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TEST FACILITIES ; *SANDSTONE PROJECT; *TEST FACILITIES -- IONIZATION CHAMBERS; *TEST FACILITIES -- RADIOMETERS
Descriptors: CATHODE RAY TUBES; INFRARED RADIATION; MECHANICAL PROPERTIES; PHOTOGRAPHY; POWER TRANSMISSION LINES; VISIBLE SPECTRA
Broader Terms: ELECTROMAGNETIC RADIATION; ELECTRON TUBES; EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RADIATION DETECTORS; RADIATIONS; SPECTRA; WEAPONS

Weaponry -- (-1989)

10/5/537 (Item 237 from file: 103)
01877541 ERA-12-005076; EDB-87-005174
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 2, Part 2, Volume 2. Operation Sandstone measurements by NRL. Sandstone report No. 12, September 1947-September 1948
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: Sep 1948 p 529
Report Number(s): AD-A-995311/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A23/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The Naval Research Laboratory undertook the performance of certain experiments as part of the 1948 atomic weapon tests, on different islands of Eniwetok Atoll, were involved. This volume (Volume 2) is a presentation of the overall electronics problem, a discussion of the general design and construction of the electronic components, a detailed description and functional analysis of the operational and test electronic components, and a description of the overall test installations at each site with a description of the test methods and procedures were followed.
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TEST FACILITIES ; *SANDSTONE PROJECT; *TEST FACILITIES -- ELECTRONIC EQUIPMENT
Descriptors: FUNCTIONAL ANALYSIS; ISLANDS; THERMAL RADIATION; VISIBLE RADIATION
Broader Terms: ELECTROMAGNETIC RADIATION; EQUIPMENT; EXPLOSIONS; MATHEMATICS; NUCLEAR EXPLOSIONS; RADIATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/538 (Item 238 from file: 103)
01877538 ERA-12-005072; EDB-87-005171
Title: Operation Greenhouse: Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.9. Air drop instrumentation. Part 3. Disc camera
Corporate Source: Edgerton, Germeshausen and Grier, Inc., Boston, MA (USA)
Publication Date: 1 Sep 1985 p 39
Report Number(s): AD-A-995302/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The disc camera was designed for use to determine the growth characteristic of the fireball and so the yield. The instrument has three separate optical systems and can record three separate streak images of the fireball on a rotating glass photographic plate. The angular velocity of the photoplate at the time of exposure is determined by marker pips recorded on the photoplate. The marker generator is gated by a phototube and is turned off by a time delay. Time to minimum can be determined directly from the streaks and by the use of the scaling laws. Bhangmeter yield can also be determined. For Operation Greenhouse, two cameras were operated in phototowers. Good records were obtained on the first two shots. On the George Shot, which was a daylight test, the photocell in the fiducial marker did not function and no records were attained. The cameras were not operated on

other fireball determinations.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- NUCLEAR FIREBALLS; *NUCLEAR FIREBALLS -- MEASURING INSTRUMENTS; *NUCLEAR FIREBALLS -- YIELDS
Descriptors: STREAK CAMERAS
Broader Terms: CAMERAS; EXPLOSIONS; FIREBALLS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RADIATION DETECTORS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/539 (Item 239 from file: 103)
01877536 ERA-12-005069; EDB-87-005169
Author(s): Hall, W.C.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.1. Prompt-gamma-ray measurements. Part 3. The measurement of transit time
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Apr 1985 p 56
Report Number(s): AD-A-995292/0/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report describes the procedures followed in measuring the transit time of the atomic explosions evaluated in Operation Greenhouse. It includes a description of the equipment used, the installations made, and the results obtained. Transmit time measurements were obtainded for the Easy, George and Item Shots; and on the whole, the transit-time recording equipment performed well.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- PROMPT GAMMA RADIATION
Descriptors: RECORDING SYSTEMS; TIME MEASUREMENT
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; GAMMA RADIATION; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/540 (Item 240 from file: 103)
01877535 ERA-12-005068; EDB-87-005168
Author(s): Koch, G.E.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 6.8. cloud radiation field
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 1 Apr 1985 p 112
Report Number(s): AD-A-995291/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The object of this study was to measure the relationship between the spatial distribution of the radioactive fission products and the resultant radioactive field in an atomic-bomb cloud. Data obtained by the high-intensity rate meters and the jet impactors lead to the following conclusions: (1) There is a definite correlation between the particulate fission-particle density and the gamma-radiation intensity measured within the cloud; (2) The effective energy of the gamma radiation within the atomic bomb cloud is quite low, being of the order of 200 keV; (3) The structure of the atomic bomb cloud resembles a

(4) The average roentgen dose accumulated by a plane passing through a cloud of the type tested in the Dog and Easy Shots 210 sec after bomb detonation is approximately 125 r. The average contamination on a plane after passing through a cloud is between 10 and 20 r/hr; no contamination could be detected within the plane; (5) The gamma-radiation effects extend beyond the limits of the particulate radioactive fission products; and, (6) The visible cloud adn the fission-product particulate cloud from the bomb do not coincide exactly; the visible cloud extended beyond the fission-product-cloud in those instances where data were obtained.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- FISSION PRODUCTS; *NUCLEAR EXPLOSIONS -- RADIOACTIVE CLOUDS
Descriptors: CONTAMINATION; DETONATIONS; MEASURING INSTRUMENTS; PARTICULATES; RADIOACTIVITY; SPATIAL DISTRIBUTION; VISIBLE SPECTRA
Broader Terms: CLOUDS; DISTRIBUTION; EXPLOSIONS; ISOTOPES; MATERIALS; NUCLEAR EXPLOSIONS; PARTICLES; RADIOACTIVE MATERIALS; SPECTRA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/541 (Item 241 from file: 103)
01877534 ERA-12-005067; EDB-87-005167
Author(s): Kirk, J.E.; Seacord, D.F.; Newman, R.W.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 8.2B. Interferometer gauge pressure-time measurements
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: 1 Apr 1985 p 113
Report Number(s): AD-A-995290/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This project was charged with the responsibility of conducting tests on static aircraft panels mounted on the ground at various ranges from the blast. Pressure-versus-time data were obtained using interferometer gauges. The gauge proved to be reliable and easy to operate. Its high-frequency response enabled it to record data to the pressure rise at the front of the blast wave which had not been noted previously. These results show, from measurements taken by pressure instruments mounted flush with the ground, that the rise times at the front of the blast waves were on gamma-radiation intensity by the smple expedient of stacking a few layers of lead breic around the gauge mounts.
Major Descriptors: *AIRCRAFT COMPONENTS -- BLAST EFFECTS; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- PRESSURE GRADIENTS
Descriptors: INTERFEROMETERS; LAYERS; PRESSURE GAGES
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/542 (Item 242 from file: 103)
01877532 ERA-12-005066; EDB-87-005165
Author(s): Williams, F.L.
Title: Operation Redwing -- Project 5.2. In-flight participation of a B-52. Report for May-July 1956
Corporate Source: Boeing Airplane Group, Seattle, WA (USA)
Publication Date: 1 Apr 1985 p 68
Report Number(s): AD-A-995286/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8611

Country of Origin: United States
Country of Publication: United States
Abstract: The primary objective of this Project was to obtain measured-energy input and aircraft-response data on an instrumented B-52 aircraft when subjected to the thermal, blast, and gust effects of a nuclear explosion. To accomplish this, analysis was used in selecting the spatial location for the B-52, relative to a detonation, that would result in the desired aircraft inputs and responses. The B-52 was extensively instrumented with the major portion of the instrumentation devoted to measuring aircraft responses. The B-52 participated in nine shots, including one shot which the aircraft aborted just prior to time zero because of Bombing Navigation System difficulties. The reliability of the instrumentation system was between 95% and 100% throughout the test program.
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *AIRCRAFT -- THERMAL DEGRADATION; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *REDWING PROJECT
Descriptors: NAVIGATION; RELIABILITY; SPATIAL DISTRIBUTION
Broader Terms: DISTRIBUTION; EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/543 (Item 243 from file: 103)
01877527 ERA-12-005062; EDB-87-005160
Author(s): Cowan, M.; Munro, D.N.; Sander, H.H.
Title: Test results from automatic yield indicators
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: Oct 1960 p 44
Report Number(s): AD-611246/0/XAB
Note: Rept. on Operation HARDTACK, Apr-Oct 58. Available only for reference use at DDC Field Services. Copy is not available for public sale.; Distribution limitation now removed
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Automatic yield indicators which operate on the negative-phase duration principle were developed. Yield estimates were obtained during Hardtack Phase I for five detonations at distances ranging from 11 to 25 miles. The greatest error in yield was obtained at 22.5 miles where the ratio of indicated yield to actual yield was about 2.5. For a lapse condition, it is estimated that automatic yield indicators will nearly always indicate within a factor of 2 or 3 of the actual yield within the range to 0.1 psi peak overpressure (about 30 miles for 1 mt). Under strong low-level temperature inversions (rapid increase in temperature with increase in height above the surface) at Nevada Test Site, automatic yield indicators functioned properly on 11 shots on Operation Hardtack, Phase II. Yields ranged from 0.62 ton to 6.5 kt and distances ranged from 2 to 13 miles. On eight of these events, indicated yields were within a factor of 2 of actual yields. Greater errors on the three other events were caused by interference effects resulting from the inversion conditions. This and other blast-wave measurements indicate that factor-of-2 yield estimates can be obtained by the AYI about 70% of the time under strong inversion conditions within the range of 0.1 psi.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- YIELDS
Descriptors: AUTOMATION; ERRORS; PORTABLE EQUIPMENT; SHOCK WAVES
Broader Terms: EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/544 (Item 244 from file: 103)
5003810

Title: Operation Crossroads. Chronological History of the activities of the Director of Ship Material Joint Task Force One aboard the USS Reclaimer (ARS42) during Test Baker. Report for 24-31 July 1946
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 31 Jul 1946 p 17
Report Number(s): AD-473988/4/XAB; XRD-188
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *CROSSROADS PROJECT -- REVIEWS; *NUCLEAR EXPLOSIONS -- DAMAGE; *NUCLEAR EXPLOSIONS -- DECONTAMINATION
Descriptors: BIKINI; RADIOACTIVITY
Broader Terms: CLEANING; DOCUMENT TYPES; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/545 (Item 245 from file: 103)
01877525 ERA-12-005060; EDB-87-005158
Author(s): Smith
Title: Operation Crossroads. A comparison of the effects of test ABLE atomic bomb ionizing radiation and x rays on seeds of barley, wheat, and oats. Appendix No. 25 to Final report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 1947 p 17
Report Number(s): AD-473898/5/XAB; XRD-179
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report discusses an investigation on the biological effects of atomic bomb ionizing radiation. A large variety of biological material including animals, seeds, grain insects, bacteria, fungi, etc., were distributed on twenty-two target ships prior to the detonation of the Test ABLE bomb July 1st 1946. Barley seeds were selected as one of the test objects because of their excellent fitness for determining the effects of irradiation on mutation frequency. Young and old seeds were included in order to study the effect of age on sensitivity to irradiation. Seeds of Durum (tetraploid), common wheat (hexaploid), and common oats (hexaploid) were included in the tests in order to have results from polyploid plants for comparison with information obtained from the non-polyploid barley.
Major Descriptors: *CROSSROADS PROJECT; *IONIZING RADIATIONS -- BIOLOGICAL RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- IONIZING RADIATIONS; *SEEDS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: BARLEY; CEREALS; MUTATIONS; OATS; RADIOBIOLOGY; SENSITIVITY; WHEAT
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGY; CEREALS; EXPLOSIONS; GRASS; NUCLEAR EXPLOSIONS; PLANTS; RADIATION EFFECTS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560140 -- Radiation Effects on Plants

10/5/546 (Item 246 from file: 103)
01877524 ERA-12-005059; EDB-87-005157
Author(s): Randolph, L.F.
Title: Operation Crossroads. Effects of an atomic bomb explosion on corn

Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 23 May 1947 p 22
Report Number(s): AD-473888/6/XAB; XRD-167
Document Type: Report
Language: English
Journal Announcement: EDB8611
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The atomic bomb detonation at Bikini during Operation Crossroads offered the opportunity for exposing various biological materials including corn seed to ionizing radiation. This experiment with corn was designed to determine the effects of radiation from the atomic bomb in causing (1) alterations of the chromosome mechanism of heredity; (2) direct injurious action on the plants grown from the treated seed; and (3) sterility due to chromosomal derangement and other causes. For purposes of comparison, duplicate samples of seed were exposed to measured dosages of x rays ranging from 5000 r to 25,000 r units.
Major Descriptors: *CROSSROADS PROJECT; *IONIZING RADIATIONS -- BIOLOGICAL RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- IONIZING RADIATIONS; *SEEDS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: CHROMOSOMES; CYTOLOGY; GENETICS; MUTATIONS; RADIATION INJURIES ; RADIOBIOLOGY; VIABILITY
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BIOLOGY; EXPLOSIONS; INJURIES; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560140 -- Radiation Effects on Plants

10/5/547 (Item 247 from file: 103)
01863464 ERA-12-002020; EDB-86-187374
Title: Blood bromine levels in a Pacific atoll population
Author(s): Wielopolski, L.; Adams, W.H.; Heotis, P.M.
Affiliation: Brookhaven National Lab., Upton, NY
Source: Environ. Res. (United States) v 41:1. Coden: ENVRA
Publication Date: Oct 1986 p 91-98
Contract Number (DOE): AC02-76CH00016
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8611
Subfile: ERA (Energy Research Abstracts). JMT (DOE contractor)
Country of Origin: United States
Abstract: Serum and red cells from 20 Marshallese on two atolls and from 10 subjects in New York were compared for their elemental composition employing an energy dispersive X-ray fluorescence technique. The elements analyzed in serum included Cl, Zn, and Br, whereas red cells were analyzed for Cl, K, Fe, Zn, Br, and Rb. Both Marshallese groups showed statistically significant elevations in serum Br (51 and 96%) and in red cell Br (393 and 478%) as compared to the New York group. The Marshallese Br/Cl ratio in serum and in red cells was elevated when compared to that of the New York group, whereas the Rb/K ratios were equivalent. The red cell Br/serum Br ratio was also elevated in the Marshallese subjects. There were no similar differences noted among the other elements tested. Drinking liquids in the Marshall Islands were analyzed for Br but did not provide a clear source for the elevated Br levels.
Major Descriptors: *BROMINE -- BLOOD CHEMISTRY; *BROMINE -- ENVIRONMENTAL EXPOSURE PATHWAY; *BROMINE -- X-RAY FLUORESCENCE ANALYSIS; *CHLORINE -- X-RAY FLUORESCENCE ANALYSIS; *IRON -- X-RAY FLUORESCENCE ANALYSIS; *POTASSIUM -- X-RAY FLUORESCENCE ANALYSIS; *RUBIDIUM -- X-RAY FLUORESCENCE ANALYSIS; *ZINC -- X-RAY FLUORESCENCE ANALYSIS
Descriptors: BLOOD SERUM; CONCENTRATION RATIO; DRINKING WATER; ERYTHROCYTES ; EXPERIMENTAL DATA; MARSHALL ISLANDS; NEW YORK; SAMPLING
Broader Terms: ALKALI METALS; BIOLOGICAL MATERIALS; BLOOD; BLOOD CELLS;

HALOGENS; HYDROGEN COMPOUNDS; INFORMATION; ISLANDS; MATERIALS; METALS; MICRONESIA; NONDESTRUCTIVE ANALYSIS; NONMETALS; NORTH AMERICA; NUMERICAL DATA; OCEANIA; OXYGEN COMPOUNDS; TRANSITION ELEMENTS; USA; WATER; X-RAY EMISSION ANALYSIS
Subject Categories: 560306* -- Chemicals Metabolism & Toxicology -- Man -- (-1987)

10/5/548 (Item 248 from file: 103)
01862288 AIX-17-064791; ERA-12-001863; EDB-86-186182
Title: Biogeochemical studies of long-lived radionuclides in marine environments
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Jokela, T.A.
Affiliation: California Univ., Livermore, USA. Lawrence Livermore National Lab.
Title: Behaviour of long-lived radionuclides associated with deep-sea disposal of radioactive wastes. Report of a co-ordinated research programme 1982-1984
Corporate Source: International Atomic Energy Agency, Vienna (Austria) Lawrence Livermore National Lab., CA (USA)
Publication Date: Apr 1986 p 119-127
Report Number(s): IAEA-TECDOC-368
Order Number: DE86704234
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8609
Availability: NTIS (US Sales Only), PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). INIS (non-US Atomindex input AIX)
Country of Origin: United States
Country of Publication: International Atomic Energy Agency <IAEA>
Abstract: At Eniwetok and Bikini lagoons, sup(239,240)Pu is always greater than fallout levels, in water samples, and this indicates that there is remobilisation from sediments. The respective water levels are 21 fCi 1/sup -1/ and 42 fCi 1/sup -1/, and lagoon inventories 0.96 and 1.2 Ci. This is 0.08% of sediment inventories. Small amounts of /sup 241/Am also dissociate. The soluble Pu is mostly Pusup(III,IV) when associated with particles and Pusup(V,VI) when truly soluble. Concentrations of /sup 90/Sr, /sup 137/Cs, sup(239,240)Pu, /sup 241/Am, /sup 207/Bi and /sup 210/Pb, /sup 210/Bi, /sup 210/Po in fish showed variation with trophic level in some cases. Values increased between levels 2 and 5 for /sup 90/Sr, sup(239,240)Pu, /sup 241/Am, but not /sup 137/Cs. Concentration factors varied, and a single generic value for all fish species was not possible. Extrapolation of results from contaminated lagoons to lesser contaminated lagoons was not possible because in the former, radionuclides were fused with CaCO/sub 3/ and dissolve to some extent in the gut of fish. The speciation is different in lesser contaminated lagoons. Over 80% of the whole-activity of /sup 207/Bi in goatfish is associated with the muscle tissue, whereas less than 1% is found in the muscle of surgeonfish and mullet. Evidence was obtained that the isotope is translocating. Similarly /sup 210/Bi formed in fish bone translocates to liver. In the North-east Atlantic dumpsite, studies found concentrations no different from global fallout levels for radionuclides possibly leached from waste disposal practices there. 11 refs, 3 tabs.
Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *BISMUTH 207 -- RADIATION MONITORING; *BISMUTH 207 -- RADIOECOLOGICAL CONCENTRATION; *BISMUTH 210 -- RADIATION MONITORING; *BISMUTH 210 -- RADIOECOLOGICAL CONCENTRATION; *CESIUM 137 -- RADIATION MONITORING; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *FISHES -- RADIONUCLIDE KINETICS; *LEAD 210 -- RADIATION MONITORING; *LEAD 210 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *POLONIUM 210 -- RADIATION MONITORING ; *POLONIUM 210 -- RADIOECOLOGICAL CONCENTRATION; *SEAWATER --

RADIOECOLOGICAL CONCENTRATION; *SEAWATER -- RADIONUCLIDE MIGRATION; *SEDIMENTS -- RADIONUCLIDE MIGRATION; *STRONTIUM 90 -- RADIATION MONITORING; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: ATLANTIC OCEAN; BIKINI; ENIWETOK; EXPERIMENTAL DATA; RADIOACTIVE WASTE DISPOSAL
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; CESIUM ISOTOPES; DATA; DAYS LIVING RADIOISOTOPES; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; LEAD ISOTOPES; MANAGEMENT; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POLONIUM ISOTOPES; RADIOISOTOPES; SEAS; STRONTIUM ISOTOPES; SURFACE WATERS; VERTEBRATES; WASTE DISPOSAL; WASTE MANAGEMENT; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
052002 -- Nuclear Fuels -- Waste Disposal & Storage
INIS Subject Categories: B3200* -- Water
B3110 -- Radioactive materials monitoring & transport
C2120 -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/549 (Item 249 from file: 103)
01862083 AIX-17-081989; EDB-86-185977
Title: Gamma-ray activity of the fallout dust produced by the super-hydrogen bomb test explosion on March 1, 1954
Author(s): Shimizu, Sakae
Affiliation: Kyoto Univ., Uji, Japan. Inst. for Chemical Research
Source: ATOMKI Kozl. (Hungary) v 28:1. Coden: ATKOA
Publication Date: 1986 p 1-11
Document Type: Journal Article
Language: English
Journal Announcement: EDB8611
Subfile: INIS (non-US Atomindex input AIX)
Country of Origin: Japan
Abstract: The super-hydrogen bomb test explosion, called Bravo was executed on Bikini Atoll on March 1, 1954. Fallout dust collected on a Japanese fishing boat 31 years ago was analyzed using a HPGe detector. The existence of sup(241)Am, sup(155)Eu, sup(137)Cs and sup(60)Co could be proved by means of gamma spectrometry. Morphological features of the fine debris of fallout and absolute activities of the radionuclides are reported. Radioactivity results of the 'Bikini Ash' determined soon after the explosion and after 31 years are compared. (V.N.). 17 refs.
Major Descriptors: *FALLOUT -- BIKINI; *FALLOUT -- GAMMA SPECTROSCOPY
Descriptors: AMERICIUM 241; CESIUM 137; COBALT 60; EUROPIUM; HIGH-PURITY GE DETECTORS; MORPHOLOGICAL CHANGES; NUCLEAR EXPLOSIONS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES ; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; ELEMENTS; EXPLOSIONS; GE SEMICONDUCTOR DETECTORS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MEASURING INSTRUMENTS; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIATION DETECTORS; RADIOISOTOPES; RARE EARTHS; SEMICONDUCTOR DETECTORS; SPECTROSCOPY; YEARS LIVING RADIOISOTOPES

Materials Monitoring & Transport (1989)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
E1400 -- Nuclear Explosions

10/5/550 (Item 250 from file: 103)
01862075 AIX-17-064767; ERA-12-001743; EDB-86-185969
Title: Fallout plutonium in Western North Pacific sediments
Author(s): Livingston, H.D.
Affiliation: Woods Hole Oceanographic Institution, MA, USA
Title: Behaviour of long-lived radionuclides associated with deep-sea disposal of radioactive wastes. Report of a co-ordinated research programme 1982-1984
Corporate Source: International Atomic Energy Agency, Vienna (Austria)
Woods Hole Oceanographic Institution, MA (USA)
Publication Date: Apr 1986 p 27-34
Report Number(s): IAEA-TECDOC-368
Order Number: DE86704234
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8609
Availability: NTIS (US Sales Only), PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). INIS (non-US Atomindex input AIX)
Country of Origin: United States
Country of Publication: International Atomic Energy Agency <IAEA>
Abstract: The study compared sediment samples from the Mid-Pacific Gyre area north of Hawaii and from the Western North Pacific. The latter had from 2.7-5.5 the concentrations of Pu isotopes compared with the former, but the profiles with depth were similar. The increased levels were probably due to close-in fall-out from the Marshall Islands weapons tests. The inventories for water column plus sediment were 4.0-4.3 mCi km/sup -2/ for NW Pacific and 2.9 for the Mid Pacific area. The proportions in the sediments are respectively 8% and 2%. Evidence is presented that close-in fallout was more available to scavenging. For NW Pacific, significant, bioturbation, effects were seen, redistributing Pu as deep as 46 cm, even though these sediments are abyssal. This implies subsurface waste disposal may be more vulnerable to the effects of bioturbation than previously supposed. 7 refs, 2 figs, 2 tabs.
Major Descriptors: *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *SEDIMENTS -- FALLOUT DEPOSITS; *SEDIMENTS -- RADIONUCLIDE MIGRATION
Descriptors: ADSORPTION; DEPTH; EXPERIMENTAL DATA; PACIFIC OCEAN; RADIOACTIVITY; SEA BED; SEAWATER; SEDIMENT-WATER INTERFACES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; DATA; DIMENSIONS; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FALLOUT; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; INTERFACES; ISOTOPES; MASS TRANSFER; NUCLEI; NUMERICAL DATA; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; SEAS; SORPTION; SURFACE WATERS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
052002 -- Nuclear Fuels -- Waste Disposal & Storage
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
B3200 -- Water

10/5/551 (Item 251 from file: 103)
01861646 ERA-12-001446; EDB-86-185540
Author(s): Cavanagh, P.J.; Gibson, H.F.; Kirn, F.S.; Miller; Wyckoff,

Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.2. Delayed gamma-ray measurements. Part 4. Measurements under collimated conditions
Corporate Source: Rochester Univ., NY (USA)
Publication Date: Mar 1952 p 56
Report Number(s): AD-A-995420/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The primary purpose of the spatial measurements was to gain data from which the distribution of fission fragments as a function of time could be computed. Since it was considered that the previous Sandstone tests did not include enough sample points in space to provide more than a very rough idea of the distribution of fission fragments with time, it was decided, to provide more collimators, detectors with a faster response, a recorder with better time resolution, and more protection for the detectors. The radial motion of the fission fragments was expected to be available directly from the measured times of arrival of the source at the field of view of each detector.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- DELAYED GAMMA RADIATION; *NUCLEAR EXPLOSIONS -- FISSION PRODUCT RELEASE
Descriptors: CALIBRATION; COLLIMATORS; SPATIAL DISTRIBUTION
Broader Terms: DISTRIBUTION; ELECTROMAGNETIC RADIATION; EXPLOSIONS; GAMMA RADIATION; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/552 (Item 252 from file: 103)
01861635 EDB-86-185529
Author(s): Hedberg, C.A.; Simmons, S.H.
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests. Annex 16, Parts 1 and 2. Planning and construction. Sandstone report No. 39
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 4 Jun 1948 p 135
Report Number(s): AD-A-995322/5/XAB
Document Type: Report
Language: English
Journal Announcement: ERA8610
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Section LAJ-16 was made a part of Task Group 7.1 for the purpose of initiating and maintaining an accurate file of maps and wiring diagrams, showing the positions of all Los Alamos and Service experimental installations at the Eniwetok Proving Grounds. Proper location of all underground cables between stations occupied a prominent place in the initial planning. In order to effectively coordinate the cable installations with the main construction program, this section assumed the responsibility of acting as liaison among other LAJ sections and the Service Units designated to perform the work. Later this liaison function was expanded until LAJ-16 eventually became an active participant, rather than a coordinator, in cable laying, wiring, and generator maintenance.
Major Descriptors: *NUCLEAR EXPLOSIONS -- ENGINEERING; *NUCLEAR EXPLOSIONS -- MEASURING METHODS
Descriptors: CABLES; CONSTRUCTION; INSTALLATION; MAINTENANCE; MAPS; UNDERGROUND
Broader Terms: EXPLOSIONS; LEVELS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear --

10/5/553 (Item 253 from file: 103)
01861625 ERA-12-001433; EDB-86-185519
Author(s): Kelley; Levy
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 8.0. General report of blast studies on aircraft
Corporate Source: Massachusetts Inst. of Tech., Cambridge (USA)
Publication Date: 1 Apr 1985 p 25
Report Number(s): AD-A-995303/5/XAB
Note: Extracted version of report dated Sep 51
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: None.
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: ENIWETOK; GROUND LEVEL
Broader Terms: EXPLOSIONS; ISLANDS; LEVELS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/554 (Item 254 from file: 103)
01861624 ERA-12-001432; EDB-86-185518
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.6, blast measurements. Part 3. Pressure near ground level. Section 4. Blast asymmetry from aerial photographs. Section 5. Ball-crusher-gauge measurements of peak pressure
Corporate Source: Naval Ordnance Lab., White Oak, MD (USA)
Publication Date: 1 Apr 1985 p 65
Report Number(s): AD-A-995299/5/XAB
Note: Extracted version of report dated Feb 1952
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Aerial motion pictures from manned aircraft were taken of the Dog, Easy, and George Shots and from a drone aircraft on Dog Shot to determine whether asymmetries in the blast waves could be detected and measured. Only one film, that taken of Dog Shot from a drone, was considered good enough to warrant detailed analysis, but this failed to yield any positive information on asymmetries. The analysis showed that failure to obtain good arrival-time data arose from a number of cases, but primarily from uncertainities in magnification and timing. Results could only be matched with reliable data from blast-velocity switches by use of large corrections. Asymnetries, if present, were judged to have been too small or to have occurred too early to be detected with the slow-frame speed used. Recommendations for better results include locating the aircraft directly overhead at the time of burst and using a camera having greater frame speed and provided with timing marks.
Major Descriptors: *BLAST EFFECTS -- PRESSURE MEASUREMENT; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SHOCK WAVES -- ASYMMETRY
Descriptors: GROUND LEVEL; VELOCITY
Broader Terms: EXPLOSIONS; LEVELS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear --

10/5/555 (Item 255 from file: 103)
01861623 ERA-12-001431; EDB-86-185517
Author(s): Gibson, H.F.; Miller, W.; Motz, J.W.; Smeltzer, J.C.; Wyckoff, H.O.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.2, delayed gamma-ray measurements. Part 1. Gamma-ray spectrum measurements (abridged)
Corporate Source: National Bureau of Standards, Washington, DC (USA). Radiation Physics Div.
Publication Date: 1 Sep 1985 p 91
Report Number(s): AD-A-995298/7/XAB
Note: Extracted version of report dated Apr 52
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The measurement of bomb efficiencies from the number of gamma rays requires fundamentally two separate experiments. The average number of gamma rays emitted from the fission fragments (delayed gamma rays) per fission must be determined. This experiment can be carried out in the laboratory, a second experiment, the absolute determination of the number of gamma rays from the bomb are also attempted. Because gamma rays are not directly observable but are measured only through their secondary effects, and because the probability of occurrence of the secondary effects depends upon the gamma ray energy, it is not usually possible to count directly the number of gamma rays in a heterochromatic spectrum. A spectral distribution must be first obtained from which the actual total number of gamma rays may be computed. This volume discusses the planning for the experiment and the spectral distribution of collimated gamma rays determined from the Greenhouse tests on two shots. A discussion of measurement of build-up factor which is needed to estimate the effect of collimation is also given.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- GAMMA SPECTRA
Descriptors: FISSION PRODUCTS; GAMMA SPECTROMETERS
Broader Terms: EXPLOSIONS; ISOTOPES; MATERIALS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RADIOACTIVE MATERIALS; SPECTRA; SPECTROMETERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/556 (Item 256 from file: 103)
01861622 ERA-12-001430; EDB-86-185516
Author(s): Waters, A.J.; Clapp, R.E.
Title: Operation Redwing-Project 6.4. Airborne antennas and phototubes for determination of nuclear-weapon yield. Report for May-July 1956
Corporate Source: Advance Industries, Inc., Cambridge, MA (USA)
Publication Date: 1 Apr 1985 p 145
Report Number(s): AD-A-995297/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Airborne equipment was designed for determining the location and yield of a nuclear detonation. This equipment determines yield from a measurement of the interval between the time of the burst and the time of the second peak in the thermal-radiation intensity curve. Flush-mounted ferrite-core magnetic loop antennas for use in detecting

performed successfully during Operation Redwing. Two kinds of photocubes for detecting the second thermal peak were tested and were found about equally satisfactory. The method selected for yield determination gave results accurate + or - 16% for five shots. Detailed study of the data showed that the electromagnetic signal, consisting of a direct pulse followed by a series of ionosphere-reflected sky waves, could be used in many waves to give information concerning the detonation and the ionsphere. From the time intervals between the ground wave and sky waves, it was foun possible to compute both the distance between and receiver and the height of the reflecting ionosphere layer.
Major Descriptors: *NUCLEAR EXPLOSIONS -- NUCLEAR REACTION YIELD; *NUCLEAR REACTION YIELD -- MEASURING INSTRUMENTS; *REDWING PROJECT
Descriptors: EXTRAPOLATION; PHOTOTUBES; THERMAL RADIATION
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUMERICAL SOLUTION; RADIATIONS; YIELDS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/557 (Item 257 from file: 103)
01861620 ERA-12-001429; EDB-86-185514
Author(s): Beck, C.A.
Title: Operation Ivy. Project 8.4. Report to the Scientific Director. High-resolution spectroscopy at Ivy compared with previous tests
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Apr 1985 p 156
Report Number(s): AD-A-995294/6/XAB
Note: Extracted version of report dated Feb 55
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The high-resolution ultraviolet and visible spectra of typical test nuclear detonations up to and including Operation Ivy were analyzed and compared. Topics studied include the types of atomc and molecular material observed (with calculations, in some cases, of the relative quantities involved), the ultraviolet cutoff, and rotational temperatures. Variation of these quantities with the radiochemical yield of the bomb is indicated.
Major Descriptors: *IVY PROJECT; *NUCLEAR EXPLOSIONS -- ULTRAVIOLET SPECTRA ; *NUCLEAR EXPLOSIONS -- VISIBLE SPECTRA
Descriptors: RADIOCHEMISTRY; ROTATION; ULTRAVIOLET RADIATION
Broader Terms: CHEMISTRY; ELECTROMAGNETIC RADIATION; EXPLOSIONS; MOTION; NUCLEAR EXPLOSIONS; RADIATIONS; SPECTRA
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/558 (Item 258 from file: 103)
01861619 ERA-12-001428; EDB-86-185513
Author(s): Talbot, J.M.; Maupin, C.S.
Title: Operation Greenhouse. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 2.9. Blast injuries in foxholes
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: 1 Apr 1985 p 35
Report Number(s): AD-A-995293/8/XAB
Note: Extracted version of report dated Dec 1951
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States

Abstract: This experiment was conducted to gain information about the amount of protection from direct blast effects that may be provided by foxholes of uniform dimensions located within distances of a nuclear explosion that are recognized as lethal for combinations of thermal and ionzing radiations and indirect blast injuries. Sixteen dogs protected in foxholes were exposed in pairs to the nuclear detonation. Autopsies performed between 10 and 15 hours after the blast demonstrated mild to moderately severe lung hemorrhages and three instances of mild to moderately severe brain hemorrhage. Ruptured ear drums and blast damage to abdominal viscera were infrequent. Evidences of acute ionizing radiation injury consisted in decreases in absolute lymphocyte counts and changes in lymph nodes and spleens. Photographs and diagrams of foxholes, animals, and tissue speciments; graphs of blast pressures, gamma doses, and neutron fluxes are included.
Major Descriptors: *BLAST EFFECTS -- BIOLOGICAL EFFECTS; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- RADIATION INJURIES
Descriptors: ANIMALS; AUTOPSY; BRAIN; CONTAINERS; DAMAGE; DIAGRAMS; DOGS; GAIN; GRAPHS; HEMORRHAGE; LYMPH NODES; LYMPHOCYTES; NEUTRON FLUX; SPLEEN
Broader Terms: AMPLIFICATION; ANIMAL CELLS; ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL MATERIALS; BIOLOGICAL RADIATION EFFECTS; BLOOD; BLOOD CELLS; BODY; BODY FLUIDS; CENTRAL NERVOUS SYSTEM; CONNECTIVE TISSUE CELLS; DIAGNOSTIC TECHNIQUES; EXPLOSIONS; INJURIES; LEUKOCYTES; LYMPHATIC SYSTEM; MAMMALS; MATERIALS; NERVOUS SYSTEM; NUCLEAR EXPLOSIONS; ORGANS; PATHOLOGICAL CHANGES; RADIATION EFFECTS; RADIATION FLUX; SOMATIC CELLS; SYMPTOMS; VERTEBRATES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/559 (Item 259 from file: 103)
01861616 ERA-12-001425; EDB-86-185510
Author(s): Moulton, J.F.; Simonds, B.T.
Title: Operation Greenhouse. Scientific Director's report. Annex 1.6. Blast measurements. Part 2. Free-air peak-pressure measurements. Section 1. Nuclear explosions, 1951
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 167
Report Number(s): AD-A-995275/5/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8610
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The primary objective of this experiment was to obtain accurate information on the pressure in the shock wave in the free-air region. In particular, it was desired to know the peak pressure as a function of distance in this region. Secondary objectives were to determine the path of the triple point and to determine the peak pressure in the Mach-stem region.
Major Descriptors: *GREENHOUSE PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *SHOCK WAVES -- PRESSURE MEASUREMENT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/560 (Item 260 from file: 103)
01853468 ERA-11-057077; EDB-86-177360
Title: Operation Ivy. Joint Task Force 132, 1952. Final report
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1 Sep 1985 p 138
Report Number(s): AD-A-995443/9/XAB
Note: Extracted version of report dated 9 Jan 53

Language: English
Journal Announcement: EDB8609
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This report covers the activities of the Joint Task Force 132 in Operation Ivy, in 1952 at Eniwetok Atoll. Shots Mike and King were detonated in conjunction with eleven experimental programs. This report describes the device, weapon, and experimental programs, giving as many preliminary conclusions as can be drawn from early analysis of the data.
Major Descriptors: *IVY PROJECT -- MANAGEMENT; *IVY PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS
Descriptors: PERSONNEL; PUBLIC RELATIONS; SECURITY
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/561 (Item 261 from file: 103)
01853467 ERA-11-054734; EDB-86-177359
Author(s): Krause, E.H.
Title: Operation Greenhouse. Scientific director's report of atomic weapon tests at Eniwetok, 1951. Annex 1.5. Neutron measurements. Part 1. Diagnostic neutron experiments, Section 2. Final report
Corporate Source: Naval Research Lab., Washington, DC (USA)
Publication Date: 1 Sep 1985 p 343
Report Number(s): AD-A-995442/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8609
Availability: NTIS, PC A15/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The effects of radiation on the passage of an electromagnetic wave along a cable are too complicated to predict accurately from theory alone. Also, near the bomb, the intensity during the shot is so high that the results of laboratory measurements must be extrapolated by too many orders of magnitude to be applied with much confidence to the test conditions. Therefore, a number of cables were installed near the bomb for the sole purpose of study the radiation effects, both to help correct the data obtained in the present tests and to help predict shielding requirements in future tests. The two types of effects looked for were (1) a simple attenuation of a voltage across the line due to the shunt conductance set up when Compton-recoil electrons from the gamma rays ionize the gas between the inner and outer conductors; and (2) an induced signal due to the Compton electrons being knocked out of the inner and outer conductors in unequal amounts. On the basis of the results, a discussion is given of the adequacy of the coral shielding actually used to protect the horizontal cable runs.
Major Descriptors: *GREENHOUSE PROJECT -- NUCLEAR EXPLOSIONS; *NEUTRON MONITORS -- CALIBRATION
Descriptors: NEUTRONS
Broader Terms: BARYONS; ELEMENTARY PARTICLES; EXPLOSIONS; FERMIONS; HADRONS ; MEASURING INSTRUMENTS; MONITORS; NUCLEAR EXPLOSIONS; NUCLEONS; RADIATION MONITORS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
440200 -- Radiation Effects on Instrument Components, Instruments, or Electronic Systems

10/5/562 (Item 262 from file: 103)
01836085 ERA-11-051889; EDB-86-159967
Author(s): Bouton, E.H.; Gordon, P.B.; Tompkins, R.C.; Van Antwerp, W.R.

Title: Fallout and cloud particle studies. Final report
Corporate Source: Chemical and Radiological Labs., Army Chemical Center, MD (USA)
Publication Date: Jun 1953 p 169
Report Number(s): AD-363630/5/XAB
Note: Report on Operation Ivy, Project 5.4B (U)
Document Type: Report
Language: English
Journal Announcement: EDB8608
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The major objectives of Project 5.4b were to conduct the following studies in connection with the surface detonation of a thermonuclear device and an airdrop high-yield fission bomb: (1) To determine the fallout pattern with its characteristics of activity, particle size, and radiochemical content on the land areas at Eniwetok Atoll; and (2) To determine the rate of fallout at various locations on Eniwetok Atoll during the first 6 1/4 hr after each shot. The objectives were accomplished by (1) sampling the fallout with intermittent-fallout collectors, trays, wash tubs, and Tracerlab air monitors and by (2) analyzing the particulate matter for activity, decay, particle size, and radiochemical content.
Major Descriptors: *ATMOSPHERIC EXPLOSIONS -- IVY PROJECT; *IVY PROJECT; *NUCLEAR EXPLOSIONS -- ATMOSPHERIC EXPLOSIONS
Descriptors: FALLOUT; GROUND LEVEL; MICRONESIA; PARTICLE SIZE; PARTICLES; SAMPLING
Broader Terms: EXPLOSIONS; ISLANDS; LEVELS; NUCLEAR EXPLOSIONS; OCEANIA; SIZE
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/563 (Item 263 from file: 103)
01836082 ERA-11-051886; EDB-86-159964
Author(s): Bigger, M.M.; Gong, J.K.; Kawahara, F.K.; Fuller, R.K.; Milne, W.L.
Title: Shipboard contaminant ingress from underwater bursts. Final report
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 15 Dec 1961 p 130
Report Number(s): AD-357955/4/XAB
Note: Report on Operation Hardtack, Proj. 2.2 (U)
Document Type: Report
Language: English
Journal Announcement: EDB8608
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: For the target destroyers moored in the downwind sector of the base surge, fallout, or cloud after Shots Wahoo and Umbrella, with ventilation systems open (but fans secured) and boilers operating, it was concluded that: (1) the doses due to the ingress of contaminants were secondary to the doses due to transient radiation sources exterior to the ship; (2) the dose due to radioactivity deposited in the body was always insignificant compared to the total exposure dose; (3) no dose due to the ingress of contaminants was of a magnitude that would result in casualties or any reduction in combat effectiveness to personnel; (4) if shielding were provided to reduce the dose due to exterior transient radiation sources for operations in the base surge, cloud, or fallout, then the doses due to the ingress of contaminants would require consideration under any concept of dosage control for repeated exposures.
Major Descriptors: *HARDTACK PROJECT; *NUCLEAR EXPLOSIONS -- UNDERWATER

Descriptors: CONTAMINATION; FALLOUT; RADIATION DOSES; WIND
Broader Terms: DOSES; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/564 (Item 264 from file: 103)
01836077 ERA-11-051881; EDB-86-159959
Title: Timing and firing. Report for April-October 1958
Corporate Source: Edgerton, Germeshausen and Grier, Inc., Boston, MA (USA)
Publication Date: 14 Sep 1959 p 86
Report Number(s): AD-337910/4/XAB
Note: Report on Operation Hardtack
Document Type: Report
Language: English
Journal Announcement: EDB8608
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: On Operation Hardtack, arming and firing signals for 35 devices in addition to a sequence of timing signals for the experimental programs are presented. Also, a voice countdown on all dry runs and detonations, monitoring vital information, and determining, where practicable, the time of burst and the Bhangmeter yield is included. The complexity of the shot schedule, which involved several differing modes of detonation, necessitated a multiple timing and firing installation comprising seven independent systems; three were operated from Eniwetok, two from Bikini, one on the USS Boxer, and one on Johnston Island (Operation Newsreel). Besides the four control centers, the timing and firing complex included nine island-based, signal distribution stations, as well as several shipboard stations. A versatile timing system was devised for this operation which employed a coder-decoder combination capable of transmitting twenty-four signals. Signals were transmitted by telephone line or on radio frequencies as dictated by the individual shot requirements. The timing and firing system operated accurately and reliably, and all signals were transmitted.
Major Descriptors: *HARDTACK PROJECT -- NUCLEAR WEAPONS; *NUCLEAR WEAPONS -- DETONATIONS; *NUCLEAR WEAPONS -- TIMING CIRCUITS
Descriptors: RADIO EQUIPMENT; SIGNALS
Broader Terms: ELECTRONIC CIRCUITS; ELECTRONIC EQUIPMENT; EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/565 (Item 265 from file: 103)
01836076 ERA-11-051899; EDB-86-159958
Author(s): Phillips, J.; Klemm, J.; Goetz, J.
Title: Internal dose assessment -- Operation Crossroads. Technical report, 11 January 1984-15 April 1985
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 30 Oct 1985 p 88
Report Number(s): AD-A-168803/5/XAB; SAIC-84/3072
Document Type: Report
Language: English
Journal Announcement: EDB8609
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The radiation dose commitment to ten body organs/parts, due to inhalation of resuspended nuclear contaminants from target ships exposed to the underwater burst (Test Baker) is determined for

CROSSROADS. Four representative ships, INDEPENDENCE, NEW YORK, PENSACOLA and SALT LAKE CITY, are examined for the personnel activities associated with post-BAKER reboarding. Additionally, the dose due to internal emitters is assessed for personnel who unloaded ammunition from twenty target ships at Kwajalein, and for shipyard workers exposed to eight of the higher intensity ships at Pearl Harbor, Puget Sound, and San Francisco Naval Shipyards. For almost all activities, fifty-year bone dose commitments are less than 0.15 rem from any annual period of exposure.
Major Descriptors: *CROSSROADS PROJECT -- UNDERWATER EXPLOSIONS; *PERSONNEL -- RADIATION DOSES; *SHIPS -- CONTAMINATION; *UNDERWATER EXPLOSIONS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: INHALATION
Broader Terms: BIOLOGICAL EFFECTS; DOSES; EXPLOSIONS; INTAKE; NUCLEAR EXPLOSIONS; RADIATION EFFECTS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/566 (Item 266 from file: 103)
01836075 ERA-11-051890; EDB-86-159957
Author(s): Oleson, M.H.
Title: Detection of fireball light at distances
Corporate Source: Air Force Technical Applications Center, Patrick AFB, FL (USA)
Publication Date: 29 Aug 1958 p 19
Report Number(s): AD-363644/6/XAB
Note: Report on Operation Ivy Project 7.6 (U)
Document Type: Report
Language: English
Journal Announcement: EDB8608
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Attempts were made to detect at long distances the light emitted from the Ivy detonations. Two locations, Johnston Island (3,100 km) and Kwajalein Island (620 km), were chosen. At Kwajalein, in addition to a ground installation, equipment was also mounted in a plane flying above the cloud cover. Measurements were made with red- and blue-sensitive photocells. Out of a possible total of six records, only one positive detection was made and this was from the equipment in the plane on the occasion of King shot. The remaining cases are accounted for as follows: Three cases were timing-notification uncertainties which make it impossible to state that the equipment was operating at detonation time; one case where it is known that the equipment was operating at the right time, but there is no record of the light signal. It is concluded that light from a nuclear detonation can be detected to a distance of about 600 km under favorable conditions. Any further work should emphasize a basic study of the phenomena involved in the transmission of light beyond the horizon.
Major Descriptors: *IVY PROJECT; *NUCLEAR EXPLOSIONS -- LIGHT TRANSMISSION
Descriptors: ABSORPTION; ATTENUATION; DETECTION
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/567 (Item 267 from file: 103)
01821977 EDB-86-145853
Author(s): Parker, H.M.
Title: Fallout comparisons
Corporate Source: General Electric Co., Richland, WA (USA). Hanford Atomic Products Operation
Publication Date: 10 Nov 1954 p 5
Report Number(s): HW-33754
Order Number: DE86013645

Declassified 1 Nov 1971
Document Type: Report
Language: English
Journal Announcement: NTS8609
Availability: NTIS, PC A02/MF A01; 1.
Subfile: NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: Data on the average total fall-out over the United States following the Castle series of tests in the spring of 1954 are compared with data on fall-out depositions in and around company facilities at Hanford Works and KAPL.
Major Descriptors: *CASTLE PROJECT -- FALLOUT; *HANFORD RESERVATION -- FALLOUT DEPOSITS
Descriptors: COMPARATIVE EVALUATIONS; HAPO; KAPL
Broader Terms: EXPLOSIONS; FALLOUT; NATIONAL ORGANIZATIONS; NUCLEAR EXPLOSIONS; US AEC; US DOE; US ERDA; US ORGANIZATIONS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
053000 -- Nuclear Fuels -- Environmental Aspects

10/5/568 (Item 268 from file: 103)
01807127 ERA-11-041717; EDB-86-130995
Author(s): Adams, W.H.; Engle, J.R.; Harper, J.A.; Heotis, P.M.; Scott, W.A.
Title: Medical status of Marshallese accidentally exposed to 1954 Bravo fallout radiation, January 1983-December 1984
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: 1986 p 56
Report Number(s): BNL-51958
Order Number: DE86006416
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8608
Availability: NTIS, PC A04/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: March 1, 1984, was the 30th anniversary of the Bravo thermonuclear test that resulted in the accidental exposure of the populations of Rongelap and Utirik atolls to radioactive fallout. The chronicling of the medical events resulting from that exposure is continued in this report, which covers the period from January 1983 through December 1984. An updated listing of all relevant publications from the Medical Department Brookhaven National Laboratory, is presented in the Reference Section. Thirty years of observation continue to show no detectable increase in mortality in the exposed population as a result of that exposure. The survival curves of the high-exposure Rongelap group, the low-exposure Utirik population, and an unexposed group of Rongelap people matched by age and sex to the exposed Rongelap group in 1957 continue to be similar. 89 refs., 2 figs., 6 tabs.
Major Descriptors: *HUMAN POPULATIONS -- MEDICAL SURVEILLANCE; *LOCAL FALLOUT -- HEALTH HAZARDS; *MORTALITY -- EPIDEMIOLOGY
Descriptors: BIOLOGICAL RADIATION EFFECTS; EXPERIMENTAL DATA; MARSHALL ISLANDS
Broader Terms: BIOLOGICAL EFFECTS; DATA; FALLOUT; HAZARDS; INFORMATION; ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; POPULATIONS; RADIATION EFFECTS; SURVEILLANCE
Subject Categories: 560151* -- Radiation Effects on Animals -- Man

10/5/569 (Item 269 from file: 103)
01806389 ERA-11-041506; EDB-86-130257
Author(s): Pantall, J.T.; Haskell, N.A.
Title: Operation Hardtack. Project 1.10. Blast overpressure from very-high altitude bursts. Report for April-October 1958
Corporate Source: Air Force Geophysics Lab., Hanscom AFB, MA (USA)
Publication Date: 31 Oct 1984 p 32
Report Number(s): AD-A-995278/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective was the measurement of time of arrival, peak overpressure, and pressure versus time at five balloon-borne canisters suspended at various distances below a device (Shot Yucca) detonated at a very-high altitude. In order to circumvent telemetry blackout, the pressure data were to be stored on internal recorders and then played back into the telemeter transmitters, as well as telemetered directly. A power failure in the receiving station just before shot time rendered the command transmitter inoperative; in consequence, the canister recorders could not be turned on, and no delayed telemetering was possible. Direct telemetering was blacked out at the three closest canisters and the transmitter in the fourth had not responded to the turn-on command signal before power failure occurred, but a direct telemetering signal was received from the most-distant canister. An apparent pressure signal was recorded, but the wave form was abnormal, and the time of arrival and peak overpressure appeared to be mutually inconsistent. It is believed that the signal was spurious and may have been produced by damage to the canister. About 0.3 second after the arrival of the questionable pressure signature, the radio-frequency carrier from this canister was lost, and no further data were obtained. It is possible that the loss of signal represents the actual shock-arrival time.
Major Descriptors: *ATMOSPHERIC EXPLOSIONS -- PRESSURE MEASUREMENT; *HARDTACK PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- ATMOSPHERIC EXPLOSIONS
Descriptors: ALTITUDE; WAVE FORMS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/570 (Item 270 from file: 103)
01806377 ERA-11-041494; EDB-86-130245
Author(s): Thomas, C.; Goetz, J.; Klemm, J.; Weitz, R.
Title: Analysis of radiation exposure for Naval personnel at Operation Castle. Technical report, 1 January 1983-31 January 1984
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 28 Feb 1984 p 179
Report Number(s): AD-A-166033/1/XAB; SAI-84/1517
Document Type: Report
Language: English
Journal Announcement: EDB8607
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Film-badge doses are reconstructed for sixteen ships and the residence islands of Enewetak and Kwajalein Atolls resulting from the six nuclear detonations comprising Operation CASTLE (March-May 1954). Fallout from Shots BRAVO and ROMEO was the major source of

the total doses of the shipboard and island-based personnel; no fallout was experienced as a result of Shot KOON. Shipboard personnel received additional exposure from hulls and salt water piping systems that had become contaminated from operating in the radioactive waters of Bikini Lagoon. From the reconstructed radiation environments, both topside and below, an equivalent film badge dose is calculated and compared to actual dosimetry data. Agreement is very good during badged periods when the ships received significant fallout. When topside intensities were not documented, generally late in the operation when intensity levels were low, agreement is not as good. Calculated ship contamination doses of significance are in excellent agreement with limited available dosimetry data. Calculated average doses for shipboard personnel range from a low of 0.19 rem for the crew of the USS LST-825 to a high of 3.56 rem for the crew of the USS PHILIP. Average doses on the residence islands of Enewetak and Kwajalein Atolls are 1.09 rem and 0.32 rem, respectively.

Major Descriptors: *CASTLE PROJECT -- FALLOUT; *CASTLE PROJECT -- NUCLEAR EXPLOSIONS; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- FALLOUT; *SHIPS -- CONTAMINATION
Descriptors: DOSIMETRY; RADIOACTIVITY; SHIELDING; WATER
Broader Terms: DOSES; EXPLOSIONS; HYDROGEN COMPOUNDS; NUCLEAR EXPLOSIONS; OXYGEN COMPOUNDS; PERSONNEL
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/571 (Item 271 from file: 103)
01802513 ERA-11-040120; EDB-86-126377
Title: Pacific island solar monitoring program
Author(s): Takahashi, P.K.
Title: Hawaii Natural Energy Institute annual report, July 1982-June 1983
Corporate Source: Hawaii Univ. at Manoa, Honolulu (USA). Hawaii Natural Energy Inst.
Publication Date: 1983 p 23-25
Report Number(s): DOE/SF/11846-T1
Order Number: DE84001826
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8608
Availability: NTIS, PC A06/MF A01.
Subfile: TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: The Pacific island global insolation study developed as one small component of a much larger renewable energy assessment program proposed by HNEI for the US Pacific island territories. The initial proposal submitted by HNEI to the US Department of Energy (USDOE) called for a comprehensive solar, wind, and biomass energy assessment program for American Samoa, the Marshall Islands, the Federated States of Micronesia, Palau, Guam, and the Northern Mariana Islands. What finally emerged for HNEI was an $8000 solar monitoring subcontract for nine Pacific island sites, as a part of a larger agreement between USDOE and the Hawaii Department of Planning and Economic Development for $50,378 on technical assistance in energy applications for the US Pacific Territories. HNEI's role was to receive and to reduce the data tapes into easily interpreted global insolation values. A secondary objective was to provide advice and limited servicing to help keep the nine stations operating. The table presented summarizes the global insolation data recorded from June 1982 through May 1983.
Major Descriptors: *INSOLATION -- EXPERIMENTAL DATA; *OCEANIA -- INSOLATION
Descriptors: DATA ACQUISITION; HAWAII
Broader Terms: DATA; FEDERAL REGION IX; INFORMATION; NORTH AMERICA; NUMERICAL DATA; USA
Subject Categories: 140100* -- Solar Energy -- Resources & Availability

01797213 ERA-11-038780; EDB-86-121001
Author(s): Mahoney, J.J.; Maloney, J.C.; Furrow, S.D.; Kilminster, D.T.; Alvares, N.J.
Title: Operation Hardtack. Projects 8.7/2.12d. Thermal radiation from very-low-yield burts, April-October 1958
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 27
Report Number(s): AD-A-995281/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: THe objectives of Project 8.7 were to determine the thermal radiant exposure (cal/sq cm) versus distance from ground zero for a fractional-kiloton nuclear device and the total luminous flux (lumens/sq ft) as a function of both time and distance from ground zero. The objectives of Project 2.12d at shot Hamilton were to determine the thermal radiant exposure versus distance for a fractional-kiloton detonation, and to compare the experimentally obtained radiant-exposure values with those calculated from existing scaling laws.
Major Descriptors: *HARDTACK PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION
Descriptors: ENERGY YIELD; LUMINOSITY
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; OPTICAL PROPERTIES; PHYSICAL PROPERTIES; RADIATIONS; YIELDS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/573 (Item 273 from file: 103)
01797213 ERA-11-038780; EDB-86-121001
Author(s): Drause, E.H.
Title: Operation Ivy. Pacific Proving Grounds. Projects 2.1 to 2.4 and Project 2.6, measurements of reaction history. Volume 1. Summary of results. Final report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 19
Report Number(s): AD-A-995279/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: This is the final report on the Naval Research Lab diagnostic experiments performed on Operation Ivy during the fall of 1952.
Major Descriptors: *IVY PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- THERMONUCLEAR REACTIONS; *THERMONUCLEAR REACTIONS -- MEASURING METHODS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; NUCLEAR REACTIONS; NUCLEOSYNTHESIS; SYNTHESIS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/574 (Item 274 from file: 103)
01797212 ERA-11-038779; EDB-86-121000
Author(s): Hudgins, A.J.
Title: Operation Greenhouse. Scientific Director's Report. Annex 1.12. Long-distance measurement of energy yield of an atomic explosion. Nuclear explosions 1951
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)

Report Number(s): AD-A-995271/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The energy yield of an atomic explosion was determined at logn distance by measuring the time variation of the light from the explosion and applying an empirical formula that relates this to the energy yield. The light was detected by an RCA 5819 photomultiplier tube and was recorded on a magnetic-tape recorder. Measurements at Shot Easy were made from A C-54 airplane flying at 12,500 ft at a distance of 630 miles northwest of Eniwetok. The time to the minimum of light intensity was 23.5 + or - 0.8 msec, corresponding to a yield of 53 + or - 4 kt. The yield calculated from the radiochemical measurements was 46.8 + or - 1.0 kt. The peak intensity of the flash above the ambient was measured to be 1.7 millicandles/sq ft. This experiment indicated that energy yield can be measured at a distance greater than 630 miles at night. Possible propagation mechanisms are discussed. Studies of the maximum range in daylight and of improvements in technique are suggested.
Major Descriptors: *GREENHOUSE PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- ENERGY YIELD
Descriptors: RADIOCHEMISTRY; RECORDING SYSTEMS
Broader Terms: CHEMISTRY; EXPLOSIONS; NUCLEAR EXPLOSIONS; YIELDS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/575 (Item 275 from file: 103)
01797209 ERA-11-038776; EDB-86-120997
Author(s): Ogle, W.E.
Title: Operation Castle. Operation Plan Number 1-53. Task Group 7.1
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Aug 1984 p 133
Report Number(s): AD-A-995272/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: Overseas experimentation depends upon progress of construction, reliability of instrumentation and the overcoming of obstacles presented by local conditions. This Operation Plan is intended to be used as a guide for TG 7.1 personnel since it represents a record of agreements arrived at prior to its compilation.
Major Descriptors: *CASTLE PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- PLANNING
Descriptors: MANAGEMENT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/576 (Item 276 from file: 103)
01797208 ERA-11-038775; EDB-86-120996
Author(s): Olseon, M.H.
Title: Operation Castle. Project 7.1. Electromagnetic radiation calibration, Pacific)roving ground. Report for March-May 1954
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Aug 1984 p 34
Report Number(s): AD-A-995271/4/XAB
Document Type: Report

Journal Announcement: EDB8606
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: A total of 17 stations, one close-in (320 km from Bikini and 23 km from Eniwetok) and the balance at distances, were operated for the electromagnetic experimental effort. Seventy-four sets of data were obtained from a possible total of 102. Of the remaining 28 sets, no data were obtained because equipment was not in operation, records were not readable, the alert notifications were not received, signals were not discernible, or equipment malfunctioned.
Major Descriptors: *CASTLE PROJECT -- NUCLEAR EXPLOSIONS; *ELECTROMAGNETIC RADIATION -- CALIBRATION; *NUCLEAR EXPLOSIONS -- ELECTROMAGNETIC RADIATION
Descriptors: DATA ANALYSIS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/577 (Item 277 from file: 103)
01797205 ERA-11-038772; EDB-86-120993
Author(s): Burriss, S.W.
Title: Operation Ivy. Report of commander, Task Group 132.1. Pacific Proving Grounds. Joint Task Force 132
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 58
Report Number(s): AD-A-995267/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The mission of the Task Group included the responsibilities to conduct experimental measurement programs on Shots Mike and King and to conduct the radiological safety program. Programs were established to make radiochemical analysis of bomb debris; to follow the progress of the nuclear reaction; to make neutron, gamma-ray, blast, thermal radiation, and electromagnetic measurements; and to make a preliminary geophysical and marine survey of the test area. The organizational structure and command relations to accomplish the mission are outlined.
Major Descriptors: *IVY PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- RADIOCHEMISTRY; *NUCLEAR EXPLOSIONS -- RADIOLOGY
Descriptors: BOMBS; GEOPHYSICS; NUCLEAR REACTIONS; SAFETY; SURVEYS; TEST FACILITIES; THERMAL RADIATION
Broader Terms: CHEMISTRY; ELECTROMAGNETIC RADIATION; EXPLOSIONS; MEDICINE; NUCLEAR EXPLOSIONS; NUCLEAR MEDICINE; RADIATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/578 (Item 278 from file: 103)
01797204 ERA-11-038771; EDB-86-120992
Author(s): Wyckoff, C.W.; Shaftan, K.; Penney, W.G.; Von Neumann, J.; Debenham, J.K.
Title: Operation Crossroads. Report of the Technical Director. Volume 2. Enclosures L thru R
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Aug 1984 p 401
Report Number(s): AD-A-995266/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A18/MF A01.

Country of Origin: United States
Country of Publication: United States
Abstract: These enclosures contain: L--detailed photographic plans for Shot Baker along with a preliminary interpretation of the results; M--additional information on the technical photography for Operation Crossroads; N--instrumentation plan and organization for Crossroads; and R--a set of calculated data for primary and reflected shocks. Enclosures O, P, and Q are omitted since they include plans for Test C which was not executed.
Major Descriptors: *CROSSROADS PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- PHOTOGRAPHY; *NUCLEAR EXPLOSIONS -- SHOCK WAVES
Descriptors: CLOUDS; PLANNING; SPRAYS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/579 (Item 279 from file: 103)
01797203 ERA-11-038770; EDB-86-120991
Author(s): Kidd, L.W.; Johnson, R.H.
Title: Operation Hardtack. Project 1.6. Water-wave measurements. Report for April-October 1958
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 64
Report Number(s): AD-A-995265/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objectives were to study wave-generation mechanisms for two underwater shots, Wahoo and Umbrella, and to examine the terminal effects of these waves by inundation studies. These studies were to be integrated with the results of previous nuclear explosions under related geometries to the end that rational prediction might be made of the water waves resulting from future nuclear explosions. Inundation from Wahoo was much greater than anticipated. Inundation from Umbrella was negligible because of the protection afforded the inlands by an extensive lagoon reef.
Major Descriptors: *HARDTACK PROJECT -- UNDERWATER EXPLOSIONS; *UNDERWATER EXPLOSIONS -- WATER WAVES
Descriptors: FORECASTING; MEASURING METHODS
Broader Terms: EXPLOSIONS; GRAVITY WAVES; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/580 (Item 280 from file: 103)
01797202 ERA-11-038769; EDB-86-120990
Author(s): Burbank, C.J.; McMillian, T.; Johnson, C.T.; Rusconi, J.E.
Title: Operation Hardtack. Project 1.5. Refraction of shock from a deep-water burst. Report for April-October 1958
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 21
Report Number(s): AD-A-995264/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objectives were to check the validity of the theory of refraction of shock waves by determining the effect of refraction (resulting from temperature, salinity, and pressure gradients) on peak

underwater-pressure records as a function of distance, depth, and time for support of other projects. Gages were installed in five different stations located at 2036, 4421, 7702, 9189, and 10.420 feet on a radial line from surface zero. The importance of shock-wave refraction was substantiated at the 9189-foot station by the magnitudes of the pulses, which were significantly lower than would be predicted by calculations using isovelocity conditions.
Major Descriptors: *HARDTACK PROJECT -- UNDERWATER EXPLOSIONS; *SHOCK WAVES -- REFRACTION; *UNDERWATER EXPLOSIONS -- SHOCK WAVES
Descriptors: PRESSURE MEASUREMENT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/581 (Item 281 from file: 103)
01797201 ERA-11-038768; EDB-86-120989
Author(s): Bultmann, E.H.; McDonough, G.F.; Sinnamon, G.K.
Title: Operation Hardtack. Project 1.9. Loading on buried simulated structures in high-overpressure regions. Report for April-October 1958
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 60
Report Number(s): AD-A-995263/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this project was to study some of the factors affecting the transmission of air-blast-induced pressure through soil and the loading produced on buried structures by such pressures in the high-pressure region (approximately 250 psi). Factors studied were: (1) the attenuation of pressure in a sand deposit when the water table is a few feet below the ground surface; (2) the effect of duration of positive phase of blast on the pressure transmitted through such a soil; (3) the effect of structure flexibility on the pressure acting on structures buried in such a soil; and (4) the relationship between horizontal and vertical pressures in such a soil. The project employed 43 devices, each a rigid cylinder having one rigid end and one deformable-diaphragm end. The devices were buried at depths ranging from 0 to 20 feet at each of two locations at the Eniwetok Proving Ground. The locations were chosen to give a predicted ground surface overpressure of about 250 psi from each of two shots, Cactus and Koa.
Major Descriptors: *HARDTACK PROJECT -- NUCLEAR EXPLOSIONS; *MECHANICAL STRUCTURES -- DYNAMIC LOADS; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- PRESSURE MEASUREMENT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/582 (Item 282 from file: 103)
01797200 ERA-11-038767; EDB-86-120988
Author(s): Patteson, A.W.
Title: Operation Hardtack. Project 1.4. Physical characteristics of craters from near-surface nuclear detonations. Report for April-October 1958
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 41
Report Number(s): AD-A-995262/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States

Abstract: The objective of this project was to measure and correlate with existing data the physical characteristics of craters (radius, depth, lip height and width, throwout, and permanent vertical ground-surface displacement surrounding the crater) resulting from near-surface nuclear detonations.
Major Descriptors: *HARDTACK PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- CRATERS
Broader Terms: CAVITIES; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/583 (Item 283 from file: 103)
01797198 ERA-11-038765; EDB-86-120986
Author(s): List, R.J.
Title: Worldwide fallout from Operation Castle
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Aug 1984 p 223
Report Number(s): AD-A-995260/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A10/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States
Abstract: A worldwide network of gummed-film stations was established to monitor fallout following Operation Castle. Although meteorological data were poor, a general connection of tropospheric flow patterns with observed fallout was evident. There was a tendency for debris to remain in tropical latitudes, with incursions into the temperate regions associated with meterological disturbances of the predominately zonal flow. As the season advanced, such incursions became more evident. Outside of the tropics, the southwestern United States received the greatest total fallout, about five times that received in Japan. The total world-wide fallout up to July 1, 1954, from the Castle series outside of the immediate test areas, is estimated to be about (censored) of the total fission activity produced. The maximum fallout on any day at an individual station in the United States, corrected to sampling day, was 200,000 d/m/sq. ft. It is concluded that the probability of early fallout in inhabited regions would be reduced by holding Pacific test series in the winter months.
Major Descriptors: *CASTLE PROJECT -- FALLOUT; *FALLOUT -- GLOBAL ASPECTS; *NUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: CORRECTIONS; FILMS; JAPAN; MONITORING; PROBABILITY; SEASONS; TROPICAL REGIONS; TROPOSPHERE
Broader Terms: ASIA; EARTH ATMOSPHERE; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/584 (Item 284 from file: 103)
01797197 ERA-11-038764; EDB-86-120985
Author(s): Aronson, C.J.; Hartmann, G.K.; Lampson, C.W.; Wood, C.H.
Title: Operation Sandstone. Nuclear explosions. 1948. Scientific Director's report of atomic weapon tests at Eniwetok, 1948. Annex 5, Part 1. Blast measurements summary report
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 16 Jun 1948 p 193
Report Number(s): AD-A-995249/0/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8606
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts). GRA (NTIS NTS)
Country of Origin: United States
Country of Publication: United States

Section of Task Group 7.1, Operation Sandstone. A brief discussion is included on the general reasons for the choice of instruments which was made at the beginning of the operation. There follows a description of the actual locations of instruments. The remainder of the report is devoted to various theoretical treatments which have arisen in connection with the work. The standard comparison curve for pressure versus reduced distance is derived; some new results on the positive pressure-time curve for a spherical blast wave, the positive duration, and the impulse-time and impulse-distance variations for spherical blast waves are presented. Energy transport in the blast wave is discussed.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR WEAPONS -- TESTING
Descriptors: ENERGY TRANSFER; MEASURING METHODS
Broader Terms: EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/585 (Item 285 from file: 103)
01780573 EDB-86-104287
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Jokela, T.A.
Title: Biogeochemical studies of long-lived radionuclides in marine environments
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Jan 1985 p 11
Report Number(s): UCID-20308
Order Number: DE86010783
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: ERA8606
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: Research results from several studies relevant to seabed dispoal of radioactive wastes are briefly discussed. The studies include: (1) mobilization of plutonium from Enewetak and Bikini lagoon sediments to seawater; (2) concentrations of /sup 90/Sr, /sup 137/Cs, /sup 239+240/Pu, /sup 241/Am, /sup 207/Bi and /sup 210/Pb-/sup 210/Bi-/sup 210/Po in fish from the Marshall Islands; and (3) plutonium in northeast Atlantic sediments. (ACR)
Major Descriptors: *FISSION PRODUCTS -- RADIOECOLOGICAL CONCENTRATION; *SEA BED -- RADIONUCLIDE MIGRATION
Descriptors: AMERICIUM 241; ATLANTIC OCEAN; BISMUTH 207; BISMUTH 210; CESIUM 137; FISHES; LEAD 210; MARSHALL ISLANDS; PLUTONIUM 239; PLUTONIUM 240; POLONIUM 210; RESEARCH PROGRAMS; SEDIMENTS; STRONTIUM 90 ; TISSUES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; BODY; CESIUM ISOTOPES; DAYS LIVING RADIOISOTOPES; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; LEAD ISOTOPES; MASS TRANSFER; MATERIALS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POLONIUM ISOTOPES; RADIOACTIVE MATERIALS; RADIOISOTOPES; SEAS; STRONTIUM ISOTOPES; SURFACE WATERS; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
053000 -- Nuclear Fuels -- Environmental Aspects

INIS Subject Categories: C5210 -- Radionuclide Ecology -- Terrestrial Ecosystems
C5220 -- Environmental aspects of radioactive effluent from existing nuclear installations
E5200 -- Waste Disposal

10/5/586 (Item 286 from file: 103)
01758218 EDB-86-081912
Author(s): James, R.A.
Title: Estimate of radiation dose to thyroids of the Rongelap children following the Bravo event
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 16 Dec 1964 p 10
Report Number(s): UCRL-12273
Order Number: DE86008167
Contract Number (DOE): W-7405-ENG-48
Note: Portions of this document are illegible in microfiche products
Document Type: Report
Language: English
Journal Announcement: ERA8605
Availability: NTIS, PC A02/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: An estimate is made of the radiation dose to the thyroids of Rongelap children following the Bravo event of March 1, 1954. The available experimental data are used to estimate the dose under two alternate assumptions of mode of intake: (1) all of the intake was by inhalation, and (2) all of the intake was by oral ingestion. It is concluded that the most probable dose to the thyroid of a 3- to 4-year-old girl is in the range 700 to 1400 rad.
Major Descriptors: *MARSHALL ISLANDS -- CHILDREN; *THYROID -- RADIATION DOSES
Descriptors: CASTLE PROJECT; CONTAMINATION; FALLOUT
Broader Terms: AGE GROUPS; BODY; DOSES; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; ORGANS
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man

10/5/587 (Item 287 from file: 103)
01758190 INS-86-013693; EDB-86-081884
Title: Late radiation effects in Marshall Islanders exposed to fallout 28 years ago
Author(s): Conard, R.A.; Boice, J.D. Jr.; Fraumeni, J.F. Jr. (eds.)
Affiliation: Brookhaven National Lab., Upton, NY
Title: Radiation carcinogenesis: epidemiology and biological significance
Publisher: Raven Press,New York, NY
Publication Date: 1984 p 57-71
Document Type: Analytic of a Book
Language: English
Journal Announcement: ERA8605
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input). JMT (DOE contractor)
Country of Origin: United States
Country of Publication: United States
Abstract: In 1954, following detonation of a megaton nuclear device at Bikini, an unfortunate accident occurred owing to an unpredicted shift in winds resulting in exposure to radioactive fallout of 250 Marshallese people, 28 American servicemen on atolls to the east, and 23 Japanese fishermen on their fishing vessel. In this presentation, medical findings in the exposed Marshallese noted over the past 28 years is briefly reviewed with particular emphasis on late effects on the thyroid gland. The Marshallese were too far distant from the detonation for any direct effects, and their exposure was due entirely

consisted of penetrating whole-body gamma radiation, irradiation of the skin (principally beta radiation) from fallout deposited on the skin, and internal absorption of radionuclides from ingestion of contaminated food and water. The most serious internal exposure was that to the thyroid from radioiodines, which were relatively abundant in the fallout. 63 references, 1 figure, 4 tables.
Major Descriptors: *MARSHALL ISLANDS -- RADIATION ACCIDENTS; *THYROID -- DELAYED RADIATION EFFECTS
Descriptors: BETA PARTICLES; FALLOUT; GAMMA RADIATION; IODINE ISOTOPES; NUCLEAR EXPLOSIVES; REVIEWS; SKIN; WHOLE-BODY IRRADIATION
Broader Terms: ACCIDENTS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; CHARGED PARTICLES; DOCUMENT TYPES; ELECTROMAGNETIC RADIATION; ENDOCRINE GLANDS; EXPLOSIVES; EXTERNAL IRRADIATION; GLANDS; IONIZING RADIATIONS; IRRADIATION; ISLANDS; ISOTOPES; MICRONESIA; OCEANIA; ORGANS ; RADIATION EFFECTS; RADIATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man

10/5/588 (Item 288 from file: 103)
01758186 INS-86-013690; EDB-86-081880
Title: Hyperuricemia in the inhabitants of the Marshall Islands
Author(s): Adams, W.H.; Harper, J.A.; Heotis, P.M.; Jamner, A.H.
Affiliation: Brookhaven National Lab., Upton, NY
Source: Arthritis Rheum. (United States) v 27:6. Coden: ARHEA
Publication Date: Jun 1984 p 713-716
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: ERA8605
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input). JMT (DOE contractor)
Country of Origin: United States
Abstract: Annual medical examinations are conducted by Brookhaven National Laboratory (BNL) for a population of Marshallese who were accidentally exposed to radioactive fallout in 1954, for a comparison population, and for all inhabitants of the atolls of Rongelap and Utirik. Disease surveillance includes analysis of serum samples. Elevated serum uric acid (SUA) levels are common along Pacific populations, and modifying environmental factors have been investigated as a cause for this finding. The authors have studied SUA levels of people living in the Marshall Islands, and have found elevated values similar to those reported for other Micronesian populations. The nearly Gaussian distribution of individual serum uric acid values for men, and for women less than or equal to45 years of age, indicates that the elevation is due to a regularized increase in serum uric acid rather than to a subpopulation that has pathologic hyperuricemia. The higher serum uric acid levels appear, therefore, to be normal for the Marshallese, a conclusion supported by the infrequency of clinical gout in the population tested.
Major Descriptors: *MARSHALL ISLANDS -- RADIATION ACCIDENTS; *UROGENITAL SYSTEM DISEASES -- PATHOGENESIS
Descriptors: BIOLOGICAL RADIATION EFFECTS; BNL; EXPERIMENTAL DATA; FALLOUT; URIC ACID
Broader Terms: ACCIDENTS; AROMATICS; AZAARENES; BIOLOGICAL EFFECTS; DATA; DISEASES; HETEROCYCLIC COMPOUNDS; INFORMATION; ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; NUMERICAL DATA; OCEANIA; ORGANIC COMPOUNDS; ORGANIC NITROGEN COMPOUNDS; ORGANIC OXYGEN COMPOUNDS; PURINES; RADIATION EFFECTS; US AEC; US DOE; US ERDA; US ORGANIZATIONS; XANTHINES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
550901 -- Pathology -- Tracer Techniques
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C4500 -- Other Applications of Radiations & Radioisotopes in Life Sciences

10/5/589 (Item 289 from file: 103)
01731323 ERA-11-017490; EDB-86-055002

Title: Thyroid cancer in the Marshallese: relative risk of short-lived internal emitters and external radiation exposure
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Conference Title: Radiopharmaceutical dosimetry symposium
Conference Location: Oak Ridge, TN, USA Conference Date: 5 Nov 1985
Publication Date: 1985 p 18
Report Number(s): BNL-37335; CONF-851113-3
Order Number: DE86006245
Contract Number (DOE): AC02-76CH00016
Note: Portions of this document are illegible in microfiche products
Document Type: Report; Conference literature
Language: English
Journal Announcement: NTS8603
Availability: NTIS, PC A02/MF A01; 1.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts). TIC (Technical Information Center)
Country of Origin: United States
Country of Publication: United States
Abstract: In a study of the comparative effects of internal versus external irradiation of the thyroid in young people, we determined that the dose from internal irradiation of the thyroid with short-lived internal emitters produced several times less thyroid cancer than did the same dose of radiation given externally. We determined this finding for a group of 85 Marshall Islands children, who were less than 10 years of age at the time of exposure and who were accidentially exposed to internal and external thyroid radiation at an average level of 1400 rad. The external risk coefficient ranged between 2.5 and 4.9 cancers per million person-rad-years at risk, and thus, from our computations, the internal risk coefficient for the Marshallese children was estimated to range between 1.0 and 1.4 cancers per million person-rad-years at risk. In contrast, for individual more than 10 years of age at the time of exposure, the dose from internal irradiation of the thyroid with short-lived internal emitters produced several times more thyroid cancer than did the same dose of radiation given externally. The external risk coefficients for the older age groups were reported in the literature to be in the range of 1.0 to 3.3 cancers per million person-rad-years-at risk. We computed internal risk coefficients of 3.3 to 8.1 cancers per million person-rad-years at risk for adolescent and adult groups. This higher sensitivity to cancer induction in the exposed adolescents and adults, is different from that seen in other exposed groups. 14 refs., 8 tabs.
Major Descriptors: *ADULTS -- NEOPLASMS; *CHILDREN -- NEOPLASMS; *EXTERNAL IRRADIATION -- RISK ASSESSMENT; *INTERNAL IRRADIATION -- RISK ASSESSMENT
Descriptors: COMPARATIVE EVALUATIONS; HUMAN POPULATIONS; THYROID
Broader Terms: AGE GROUPS; BODY; DISEASES; ENDOCRINE GLANDS; GLANDS; IRRADIATION; ORGANS; POPULATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/590 (Item 290 from file: 103)
01727076 AIX-16-080569; ERA-11-016225; EDB-86-050751
Author(s): Oliveira, A.R. de
Title: Systematic register of nuclear accidents
Original Title: Registro sistematico de acidentes nucleares
Corporate Source: NUCLEBRAS, Rio de Janeiro (Brazil)
Publication Date: 1985 p 66
Report Number(s): INIS-BR-394
Order Number: DE86700747
Document Type: Report; Numerical data
Language: Portuguese
Journal Announcement: NTS8511
Availability: NTIS (US Sales Only), PC A04/MF A01.

Country of Origin: Brazil
Country of Publication: Brazil
Abstract: The Systematic Register of Nuclear Accidents is a consolidation of important accidents which occurred in the world during the period 1945-1984. Important accidents can be defined as those involving high radiation doses, which require the exposed individuals to undergo medical treatment. The organization and structuring of this register rests on the necessity for the availability of a database specifically oriented to researchers interested in studying the different nuclear accidents reported. Approximately 150 accidents in that period are presented in a summary form; these accidents had been described or reported in the scientific literature or made known through informal communications of Brazilian and foreign institutions and researchers. This register can be of interest particularly to all professionals who either directly of indirectly work in the area of nuclear or radioactive installations safety. In order to facilitate analysis by the researcher, the system was divided into 3 groups: criticality accidents (table I), fall-out on Marshall Islands (table II) and external irradiation accidents (table III). It is also included an overview of accidents in that period, indicating the total number of victims, fatal cases, and number of survivors. The author offers to the reader an extensive bibliography on the accidents described.
Major Descriptors: *REACTOR ACCIDENTS -- INFORMATION DISSEMINATION
Descriptors: BIBLIOGRAPHIES; COMPILED DATA; EXTERNAL IRRADIATION; FALLOUT; RADIATION PROTECTION; SAFETY
Broader Terms: ACCIDENTS; DATA; DOCUMENT TYPES; INFORMATION; IRRADIATION; NUMERICAL DATA
Subject Categories: 220900* -- Nuclear Reactor Technology -- Reactor Safety
INIS Subject Categories: C5100* -- Actual Accidents

10/5/591 (Item 291 from file: 103)
01726177 EDB-86-049851
Title: Status of DOE and AID stand-alone photovoltaic system field tests
Author(s): Bifano, W.J.; Delombard, R.; Ratajczak, A.F.; Scudder, L.R.
Affiliation: NASA, Lewis Research Center, Cleveland, OH
Title: Photovoltaic Specialists Conference, 17th, Kissimmee, FL, May 1-4, 1984, Conference Record
Conference Title: 17. IEEE photovoltaic specialists conference
Conference Location: Orlando, FL, USA Conference Date: 1 May 1984
Publisher: Institute of Electrical and Electronics Engineers,New York, NY
Publication Date: 1984 p 1159-1167
Report Number(s): CONF-840561-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8509
Subfile: IAA (International Aerospace Abstr.)
Country of Origin: United States
Country of Publication: United States
Abstract: The NASA Lewis Research Center (LeRC) is managing stand-alone photovoltaic (PV) system projects sponsored by the U.S. Department of Energy (DOE) and the U.S. Agency for International Development (AID). The DOE project includes village PV power demonstration projects in Gabon (four sites) and the Marshall Islands, and PV-powered vaccine refrigerator systems in six countries. The AID project includes a large village power system, a farmhouse system and two water pumping-irrigation systems in Tunisia, a water pumping/grain grinding system in Upper Volta, five medical clinic systems in four countries, PV-powered vaccine refrigerator systems in 18 countries and a PV-powered remote earth station in Indonesia. This paper reviews these PV projects and summarizes significant findings to date. 5 references.
Major Descriptors: *PHOTOVOLTAIC POWER PLANTS -- REVIEWS
Descriptors: AFRICA; HOSPITALS; PERFORMANCE TESTING; PHOTOVOLTAIC CONVERSION; PUMPS; REFRIGERATORS; SPACECRAFT POWER SUPPLIES; TECHNOLOGY

Broader Terms: BUILDINGS; CONVERSION; DIRECT ENERGY CONVERSION; DOCUMENT TYPES; ELECTRONIC EQUIPMENT; ENERGY CONVERSION; EQUIPMENT; MEDICAL ESTABLISHMENTS; POWER PLANTS; POWER SUPPLIES; SOLAR POWER PLANTS; TESTING
Subject Categories: 140600* -- Solar Energy -- Photovoltaic Power Systems

10/5/592 (Item 292 from file: 103)
01708430 FRG-84-13633; EDB-86-032097
Title: DOE and AID stand-alone photovoltaic activities: a status report
Author(s): Bifano, W.J.; Ratajczak, A.F.
Affiliation: Lewis Research Center, Cleveland, OH
Title: Progress in solar energy. Volume 6. International Interests Division
Corporate Source: American Solar Energy Society, Boulder, CO
Conference Title: American Solar Energy Society meeting
Conference Location: Minneapolis, MN, USA Conference Date: 1 Jun 1983
Publication Date: Jun 1983 p 579-584
Report Number(s): CONF-830622-Pt.5
Order Number: DE86000190
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: ERA8602
Availability: NTIS, PC A04/MF A01; 1.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The NASA Lewis Research Center (LeRC) is managing stand-alone photovoltaic (PV) system activities sponsored by the US Department of Energy (DOE) and the US Agency for International Development (AID). The DOE project includes village PV power demonstration projects in Gabon (four sites) and the Marshall Islands, PV-powered medical refrigerators in six countries, PV system microprocessor control development activities and PV-hybrid system assessments. The AID project includes a large village system in Tunisia, a water pumping/grain grinding project in Upper Volta, five medical clinics in four countries, PV-powered medical refrigerator field tests in eighteen countries and one PV-powered remote earth station application. These PV activities are reviewed and significant findings to date are summarized.
Major Descriptors: *DEVELOPING COUNTRIES -- PHOTOVOLTAIC POWER PLANTS; *DEVELOPING COUNTRIES -- PHOTOVOLTAIC POWER SUPPLIES; *PHOTOVOLTAIC POWER PLANTS -- FIELD TESTS; *PHOTOVOLTAIC POWER PLANTS -- TECHNOLOGY ASSESSMENT; *PHOTOVOLTAIC POWER SUPPLIES -- FIELD TESTS; *PHOTOVOLTAIC POWER SUPPLIES -- TECHNOLOGY ASSESSMENT
Descriptors: FEASIBILITY STUDIES; MEDICAL SUPPLIES; PUMPS; SOLAR REFRIGERATORS
Broader Terms: ELECTRONIC EQUIPMENT; EQUIPMENT; POWER PLANTS; POWER SUPPLIES; REFRIGERATORS; SOLAR COOLING SYSTEMS; SOLAR EQUIPMENT; SOLAR POWER PLANTS; TESTING
Subject Categories: 140501* -- Solar Energy Conversion -- Photovoltaic Conversion

10/5/593 (Item 293 from file: 103)
01703254 INS-86-003385; EDB-86-026921
Title: Effects of prenatal exposure to ionizing radiation
Author(s): Miller, R.W.
Affiliation: National Cancer Institute, Bethesda, MD
Title: Some issues important in developing basic radiation protection recommendations
Corporate Source: National Council on Radiation Protection and Measurements, Bethesda, MD (USA)
Conference Title: 20. annual meeting of the National Council on Radiation Protection and Measurements
Conference Location: Washington, DC, USA Conference Date: 4 Apr 1984
Publisher: National Council on Radiation Protection and Measurements,Bethesda, MD
Publication Date: 1985 p 62-70

Document Type: Analytic or a Book; Conference literature; Numerical data
Language: English
Journal Announcement: EDB8602
Availability: National Council on Radiation Protection and Measurements, 7910 Woodmont Ave., Bethesda, MD 20814.
Subfile: INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: Information concerning the effects of radiation on the embryo or fetus based on data from atomic bomb survivors, Marshallese exposed to fallout and persons exposed to radiologic procedures is reviewed. Recommendations are made for additional studies in the in utero group in Hiroshima and Nagasaki which would clarify previous findings or extend their range. 29 references, 3 tables.
Major Descriptors: *EMBRYONIC CELLS -- RADIOSENSITIVITY; *EYES -- BIOLOGICAL RADIATION EFFECTS; *FETUSES -- RADIOSENSITIVITY; *IONIZING RADIATIONS -- RADIATION HAZARDS; *LEUKEMIA -- RISK ASSESSMENT
Descriptors: A-BOMB SURVIVORS; ANIMALS; CARCINOGENESIS; EVALUATED DATA; FALLOUT DEPOSITS; MARSHALL ISLANDS; NUCLEAR MEDICINE; PATIENTS; RECOMMENDATIONS; RESEARCH PROGRAMS; TERATOGENESIS
Broader Terms: ANIMAL CELLS; BIOLOGICAL EFFECTS; BODY; BODY AREAS; DATA; DISEASES; FACE; FALLOUT; HAZARDS; HEAD; HEALTH HAZARDS; HEMIC DISEASES; HUMAN POPULATIONS; INFORMATION; ISLANDS; MEDICINE; MICRONESIA; NEOPLASMS; NUMERICAL DATA; OCEANIA; ORGANS; PATHOGENESIS; POPULATIONS; RADIATION EFFECTS; RADIATIONS; SENSE ORGANS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man

10/5/594 (Item 294 from file: 103)
01693143 ERA-11-007879; EDB-86-011700
Title: Pacific Enewetak Atoll cratering exploration completion report (PEACE Program - Pacific-Enewetak Atoll Cratering Exploration)
Corporate Source: Holmes and Narver, Inc., Las Vegas, NV (USA). Energy Support Div.
Publication Date: Sep 1985 p 53
Report Number(s): NVO-294
Order Number: DE86002149
Contract Number (DOE): AC08-76NV00020
Note: Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report
Language: English
Journal Announcement: NTS8601
Availability: NTIS, PC A04/MF A01; 1.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The primary objectives of this seaborne drilling operation were to obtain sufficient quantities of continuous, high quality carbonate core/samples, an integrated suite of geophysical logs, and other sub-sea floor data from within and adjacent to the KOA and OAK craters. This information is vital to refinement of previous interpretation and model studies detailing the dynamics of crater formation and to confirm residual postshot changes of the underlying formations. Specifically, the information obtained will provide an accurate understanding of the original dimensions of the transient craters and through precise analysis of material property samples will lead to an understanding of the response behavior of the lagoon sediments beneath the craters. All program objectives were accomplished. A total of 32 precisely positioned exploratory holes were completed in KOA and OAK craters from a drill ship in water depths of 30 to 200 ft. (Reference Appendix I for summary drilling curves of each borehole.)
Major Descriptors: *CRATERS -- DRILL CORES; *ENIWETOK -- CRATERS
Descriptors: BOREHOLES; PACIFIC OCEAN; SEA BED; WELL LOGGING
Broader Terms: CAVITIES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA;

Subject Categories: 580202 -- Geophysics -- Volcanology -- (1980-1989)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/595 (Item 295 from file: 103)
01693118 FR-85-02211; ERA-11-007874; EDB-86-011675
Author(s): Samaden, G.; Dallot, P.; Roche, R.
Title: Underground fluid flow in a geothermal system in the natural state. Approach of the Eniwetok atoll case
Corporate Source: CEA Centre d'Etudes de Bruyeres-le-Chatel, 92 - Montrouge (France)
Conference Title: International colloquium on SAID-SPWLA logs
Conference Location: Paris, France Conference Date: 23 Oct 1984
Publication Date: Oct 1984 p 31
Report Number(s): CEA-CONF-7484; CONF-8410349-2
Order Number: DE86750305
Note: Portions of this document are illegible in microfiche products
Document Type: Report; Numerical data; Conference literature
Language: French
Journal Announcement: NTS8510
Availability: NTIS (US Sales Only), PC A03/MF A01; 1.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: France
Country of Publication: France
Abstract: The following study uses temperature logging to show up the preference ways of underground waters and the bulk permanent movement inside the atoll. A general underground flow model has been established together with the corresponding computer program. The results obtained with a 3 layer model and a 5 layer model are presented.
Major Descriptors: *ENIWETOK -- HYDROLOGY; *GROUND WATER -- NATURAL CONVECTION
Descriptors: COMPUTERIZED SIMULATION; DEPTH 1-3 KM; DIFFUSION; EXPERIMENTAL DATA; GEOTHERMAL GRADIENTS; HYDRAULIC CONDUCTIVITY; LIQUID FLOW; TEMPERATURE LOGGING; UNDERGROUND
Broader Terms: CONVECTION; DATA; DEPTH; DIMENSIONS; ENERGY TRANSFER; FLUID FLOW; HEAT TRANSFER; HYDROGEN COMPOUNDS; INFORMATION; ISLANDS; LEVELS; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NUMERICAL DATA; OCEANIA; OXYGEN COMPOUNDS; SIMULATION; TEMPERATURE GRADIENTS; WATER; WELL LOGGING
Subject Categories: 580100* -- Geology & Hydrology -- (-1989)

10/5/596 (Item 296 from file: 103)
01692997 ERA-11-007857; EDB-86-011554
Author(s): Cuddihy, R.G.; Newton, G.J.
Title: Human radiation exposures related to nuclear weapons industries
Corporate Source: Lovelace Biomedical and Environmental Research Inst., Albuquerque, NM (USA). Inhalation Toxicology Research Inst.
Publication Date: Sep 1985 p 171
Report Number(s): LMF-112
Order Number: DE86004188
Contract Number (DOE): AC04-76EV01013
Note: Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8601
Availability: NTIS, PC A08/MF A01; 1.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: A review is presented of radiation exposures resulting from American nuclear weapons test, nuclear weapons fabrication and from non-nuclear accidents involving nuclear weapons. 221 refs., 50 figs., 45 tabs. (DTT)
Major Descriptors: *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR

Descriptors: DATA COMPILATION; HUMAN POPULATIONS; LOW DOSE IRRADIATION; MARSHALL ISLANDS; NEVADA TEST SITE; NUCLEAR WEAPONS; PLUTONIUM; ROCKY FLATS PLANT
Broader Terms: ACCIDENTS; ACTINIDES; DATA; DOSES; DOSIMETRY; ELEMENTS; EXPLOSIONS; INFORMATION; IRRADIATION; ISLANDS; METALS; MICRONESIA; NATIONAL ORGANIZATIONS; NUMERICAL DATA; OCEANIA; PERSONNEL; POPULATIONS ; TRANSURANIUM ELEMENTS; US AEC; US DOE; US ERDA; US ORGANIZATIONS; WEAPONS
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
560151 -- Radiation Effects on Animals -- Man
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man
C1500 -- Effects of External Radiation on Man

10/5/597 (Item 297 from file: 103)
01692990 EDB-86-011547
Author(s): Adams, W.H.
Title: Late biological effects from internal and external exposure
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Conference Title: Health Physics Society symposium
Conference Location: Hammond, LA, USA Conference Date: 28 May 1985
Publication Date: 1985 p 12
Report Number(s): BNL-37087; CONF-8505213-1
Order Number: DE86001181
Contract Number (DOE): AC02-76CH00016
Note: Portions of this document are illegible in microfiche products
Document Type: Report; Conference literature; Numerical data
Language: English
Journal Announcement: ERA8601
Availability: NTIS, PC A02/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: Information on late biological effects of radiation was obtained from the long-term medical followup of a small population of Marshallese accidentally exposed to radioactive fallout from a thermonuclear test in 1954. Endocrine data are compatible with a sequence of nonstochastic radiation effects. The ingestion of radioisotopes of iodine produced clinical thyroid hypofunction in children, biochemical evidence of thyroid dysfunction in some adults, thyroid adenomatous module formation, and, as a possible indirect effect of thyroid damage, at least two cases of pituitary adenoma. In contrast, the only evidence of a stochastic effect has been a real increase in thyroid cancers among the more highly exposed people of Rongelap, none of whom have evidence of residual disease. While three nonthyroidal cancers which are known to be inducible in humans by external irradiation have been documented in the exposed population, three similar cancers have occurred in an unexposed comparison population of Marshallese. Nonstochastic effects of radiation exposure may be common but subtle. In the Marshallese experience the morbidity of delayed nonstochastic effects far exceeds that of the stochastic. 20 refs., 5 figs., 1 tab.
Major Descriptors: *FALLOUT -- DELAYED RADIATION EFFECTS; *NEOPLASMS -- EPIDEMIOLOGY; *NEOPLASMS -- RADIOINDUCTION
Descriptors: BLOOD COUNT; EXPERIMENTAL DATA; MAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; THYROID
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DATA; DISEASES; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; INFORMATION ; ISLANDS; MAMMALS; MICRONESIA; NUMERICAL DATA; OCEANIA; ORGANS; PRIMATES; RADIATION EFFECTS; VERTEBRATES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, &

Explosions & Explosives
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man
E1400 -- Nuclear Explosions

10/5/598 (Item 298 from file: 103)
01686035 ERA-11-003683; EDB-85-185286
Author(s): Palmer, C.E.; Miller, F.R.; Stopinski, O.W.
Title: Operation Greenhouse. Scientific Director's Report. Annex 4.5. The precipitation and formation movement of clouds in the central Pacific
Corporate Source: California Univ., Los Angeles (USA). Inst. of Geophysics and Planetary Physics
Publication Date: Sep 1951 p 249
Report Number(s): AD-A-995253/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A11/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The report describes the cloud data and some of the research results of Project 4.5, Task Group 3.1, Task Force III. A rational classification of tropical clouds characteristics of the Central Pacific Ocean is attempted; fifty-two color photographs of oceanic clouds are reproduced as a foundations for a tropical cloud atlas; and the topic of cumulus precipitation is treated at some length. Then follows a discussion of the techniques necessary to any attempt to forecast the movement and transformation of atomic clouds in low latitudes, the chief attention being paid to events following the first six hours after the explosions. A method of computing vertical motions in the free atmosphere is described and applied. The report concludes with a chapter of recommendations.
Major Descriptors: *CLOUDS -- ATMOSPHERIC CIRCULATION; *GREENHOUSE PROJECT -- METEOROLOGY
Descriptors: CLASSIFICATION; FORECASTING; PACIFIC OCEAN; TROPICAL REGIONS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; SEAS; SURFACE WATERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/599 (Item 299 from file: 103)
01682425 ERA-11-002274; EDB-85-181676
Author(s): Hawpe, W.C.
Title: Solar water heating system for the equatorial tropics
Corporate Source: Hawpe (W. Carleton), Kaneohe, HI (USA)
Publication Date: 30 Jul 1979 p 45
Report Number(s): DOE/SF/02001-T1
Order Number: DE86000348
Contract Number (DOE): FG03-78SF02001
Note: Paper copy only, copy does not permit microfiche production
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8511
Availability: NTIS, PC A03; 3.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The design and construction of a residential solar water heater in the equatorial tropics are presented. Solar insolation data for the Marshall Islands are provided. Testing of the water heater revealed an overall thermal efficiency of 44%. A list of materials and their estimated costs are included. (BCS)
Major Descriptors: *SOLAR WATER HEATERS -- CONSTRUCTION; *SOLAR WATER HEATERS -- DESIGN; *SOLAR WATER HEATERS -- PERFORMANCE TESTING